

# CALIFORNIA HIGH-SPEED TRAIN

## Engineering Drawings

### RECORD SET 30% DESIGN SUBMISSION

#### **Fresno to Bakersfield**

Sierra Subdivision  
Procurement Package 1C

June 2012

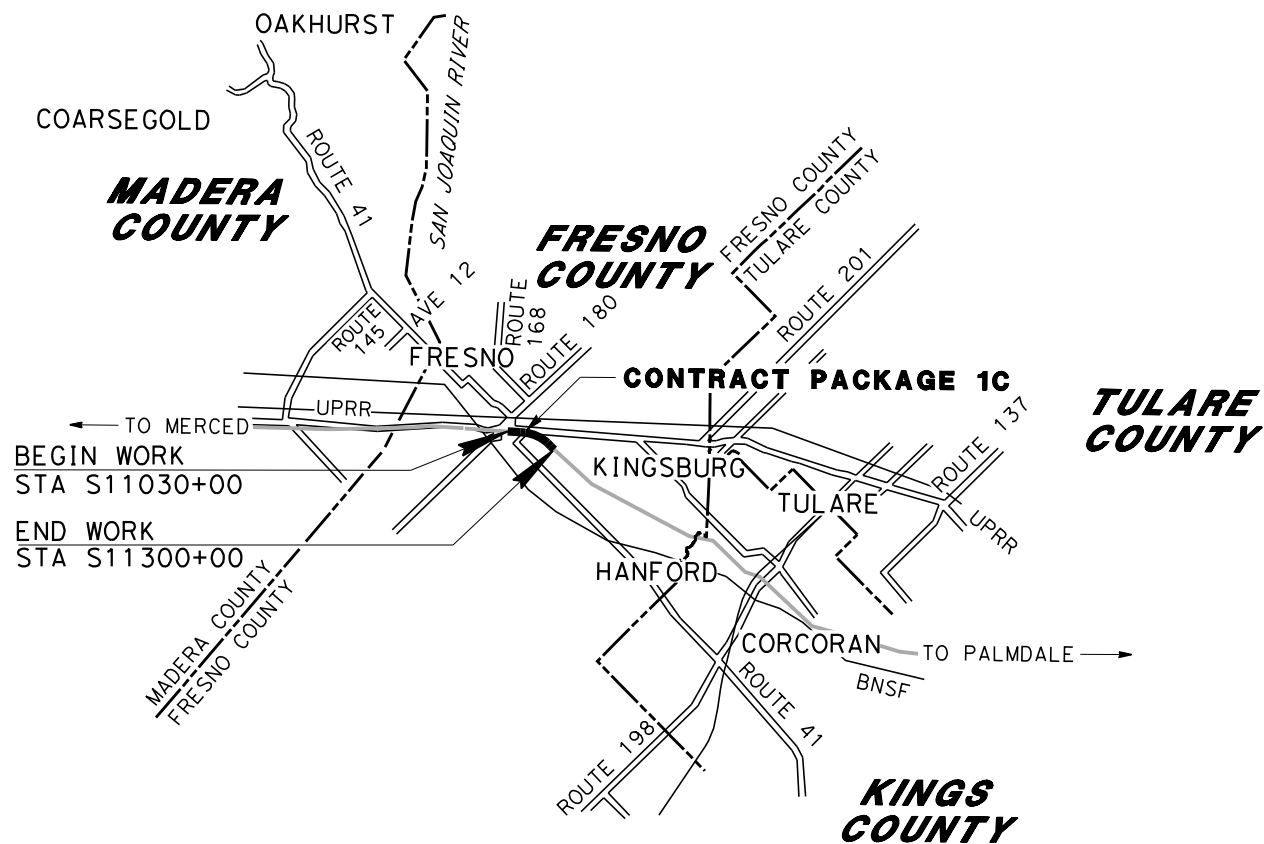
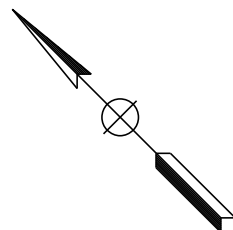
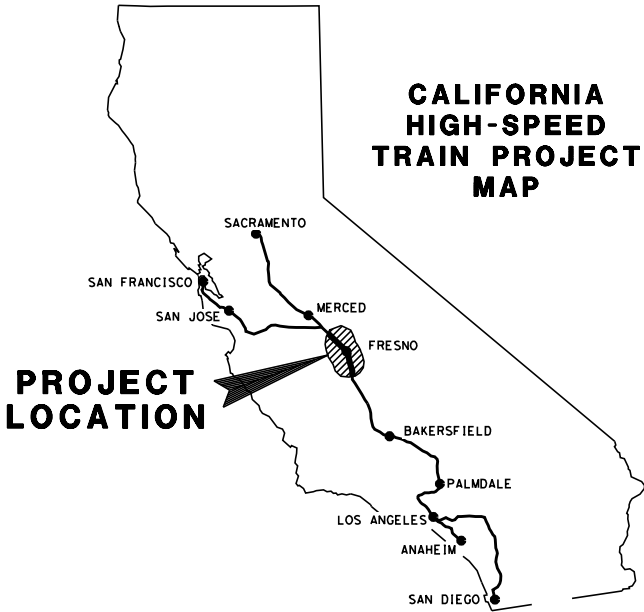


eron.sudhausen 6/5/2012 5:33:00 PM \\global\americas\Jobs\S-F\131000\131577\4 Internal Project Data\4-03 Drawings\4-03-03 30% Design\4-03-03-03 30% Design Sheets\General\Package 1C\15C-GE-D0003.dgn



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**PROPOSED PRELIMINARY DESIGN  
CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
CONTRACT PACKAGE 1C**







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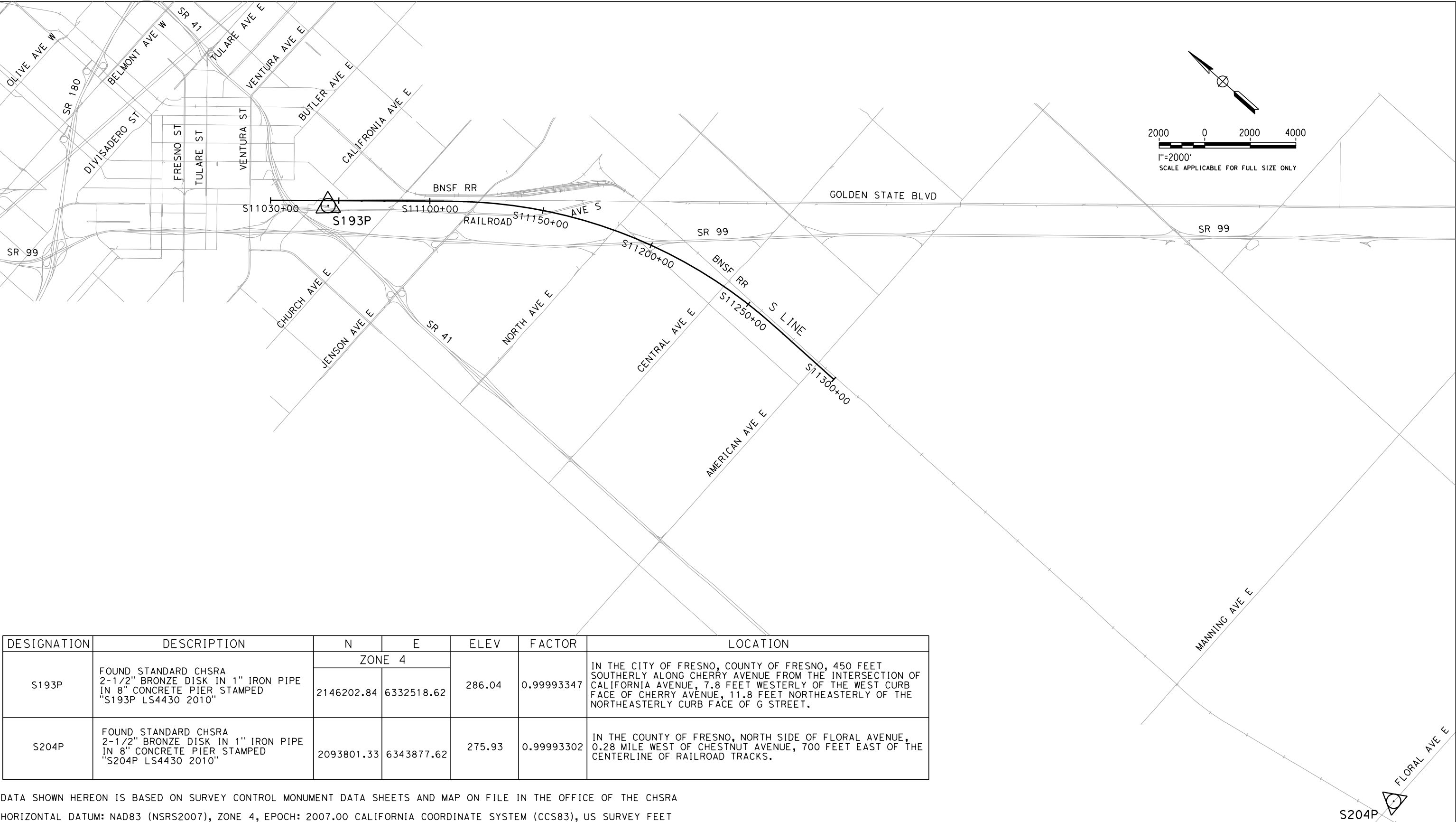
VOLUME 1 - GENERAL & TRACK GUIDEWAY

DRAWING No	DRAWING DESCRIPTION
GE-D0003	PACKAGE 1C - TITLE SHEET
GE-A0015	PACKAGE 1C - GENERAL - INDEX OF DRAWINGS
VS-C0006	PACKAGE 1C - GENERAL - SURVEY CONTROL DATA
TT-B0010	PACKAGE 1C - TRACK GUIDEWAY - KEY MAP
TT-D3012	PACKAGE 1C - TRACK GUIDEWAY - TYPICAL SECTIONS
TT-D3013	PACKAGE 1C - TRACK GUIDEWAY - TYPICAL SECTIONS
TT-D3014	PACKAGE 1C - TRACK GUIDEWAY - TYPICAL SECTIONS
TT-D3015	PACKAGE 1C - TRACK GUIDEWAY - TYPICAL SECTIONS
TT-D3016	PACKAGE 1C - TRACK GUIDEWAY - TYPICAL SECTIONS
TT-D0002	PACKAGE 1C - HORIZONTAL CURVE DATA SHEET
TT-D1018	PACKAGE 1C - TRACK GUIDEWAY - STA. 11030+00 TO 11058+00
TT-D1019	PACKAGE 1C - TRACK GUIDEWAY - STA. 11058+00 TO 11086+00
TT-D1020	PACKAGE 1C - TRACK GUIDEWAY - STA. 11086+00 TO 11114+00
TT-D1021	PACKAGE 1C - TRACK GUIDEWAY - STA. 11114+00 TO 11142+00
TT-D1022	PACKAGE 1C - TRACK GUIDEWAY - STA 11142+00 TO 11170+00
TT-D1023	PACKAGE 1C - TRACK GUIDEWAY - STA. 11170+00 TO 11198+00
TT-D1024	PACKAGE 1C - TRACK GUIDEWAY - STA. 11198+00 TO 11226+00
TT-D1025	PACKAGE 1C - TRACK GUIDEWAY - STA. 11226+00 TO 11254+00
TT-D1026	PACKAGE 1C - TRACK GUIDEWAY - STA . 11254+00 TO 11282+00
TT-D1027	PACKAGE 1C - TRACK GUIDEWAY - STA. 11282+00 TO 11300+00

ADDENDUM 3 - RFP HSR 11-16

						DESIGNED BY P. TONKIN	<div>PROPOSED PRELIMINARY DESIGN</div> <div>NOT FOR CONSTRUCTION</div>	<div> CALIFORNIA HIGH-SPEED TRAIN</div> <div></div>	<div>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</div> <div>PACKAGE 1C TRACK GUIDEWAY INDEX OF DRAWINGS</div>	CONTRACT NO.
						DRAWN BY J. BORGHESI				DRAWING NO. GE-A0015
						CHECKED BY S. BURGES				SCALE NO SCALE
						IN CHARGE R. COFFIN				SHEET NO.
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 06/06/12				

sergio\_aviles\_06/05/2012 12:59:39 PM CAHSR-r1.tbl CHSR\_PDF\_half\_black.plt P:\27560808\03-RPLANS\MASTERS\TOPOS\Control\Major\_Road\X-FB-XB-Z4-PKGE1C-\_01.dgn



DESIGNATION	DESCRIPTION	N	E	ELEV	FACTOR	LOCATION
S193P	FOUND STANDARD CHSRA 2-1/2" BRONZE DISK IN 1" IRON PIPE IN 8" CONCRETE PIER STAMPED "S193P LS4430 2010"	ZONE 4		286.04	0.99993347	IN THE CITY OF FRESNO, COUNTY OF FRESNO, 450 FEET SOUTHERLY ALONG CHERRY AVENUE FROM THE INTERSECTION OF CALIFORNIA AVENUE, 7.8 FEET WESTERLY OF THE WEST CURB FACE OF CHERRY AVENUE, 11.8 FEET NORTHEASTERLY OF THE NORTHEASTERLY CURB FACE OF G STREET.
		2146202.84	6332518.62			
S204P	FOUND STANDARD CHSRA 2-1/2" BRONZE DISK IN 1" IRON PIPE IN 8" CONCRETE PIER STAMPED "S204P LS4430 2010"	2093801.33	6343877.62	275.93	0.99993302	IN THE COUNTY OF FRESNO, NORTH SIDE OF FLORAL AVENUE, 0.28 MILE WEST OF CHESTNUT AVENUE, 700 FEET EAST OF THE CENTERLINE OF RAILROAD TRACKS.

DATA SHOWN HEREON IS BASED ON SURVEY CONTROL MONUMENT DATA SHEETS AND MAP ON FILE IN THE OFFICE OF THE CHSRA  
HORIZONTAL DATUM: NAD83 (NSRS2007), ZONE 4, EPOCH: 2007.00 CALIFORNIA COORDINATE SYSTEM (CCS83), US SURVEY FEET  
VERTICAL DATUM: NAVD88, US SURVEY FEET

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. STOCKINGER
DRAWN BY S. AVILES
CHECKED BY J. LABANOWSKI
IN CHARGE G. HORTON
DATE 6/6/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



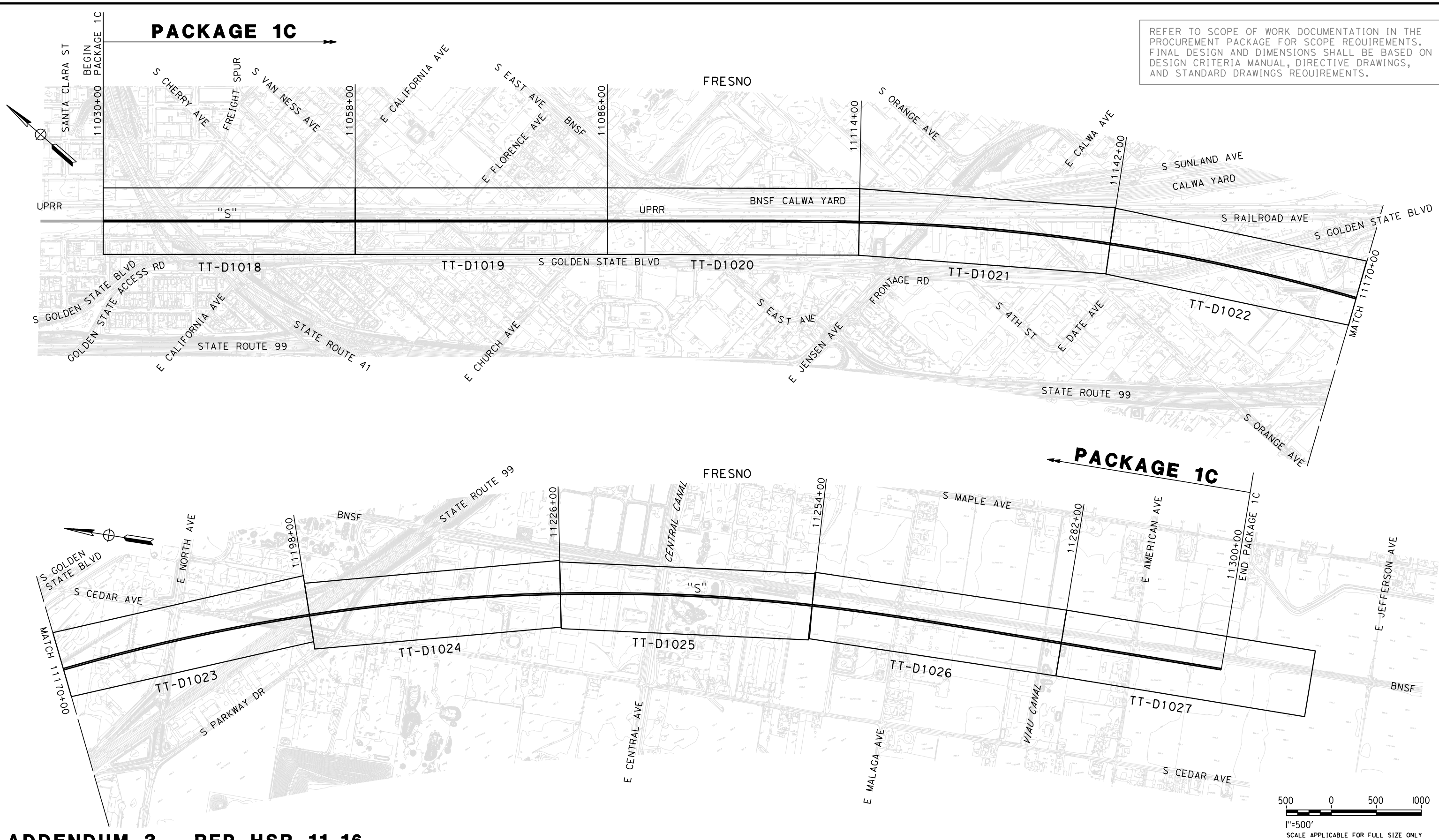
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
GENERAL  
SURVEY CONTROL DATA  
SHEET 1 OF 1

CONTRACT NO.
DRAWING NO. VS-C0006
SCALE AS SHOWN
SHEET NO.



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**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

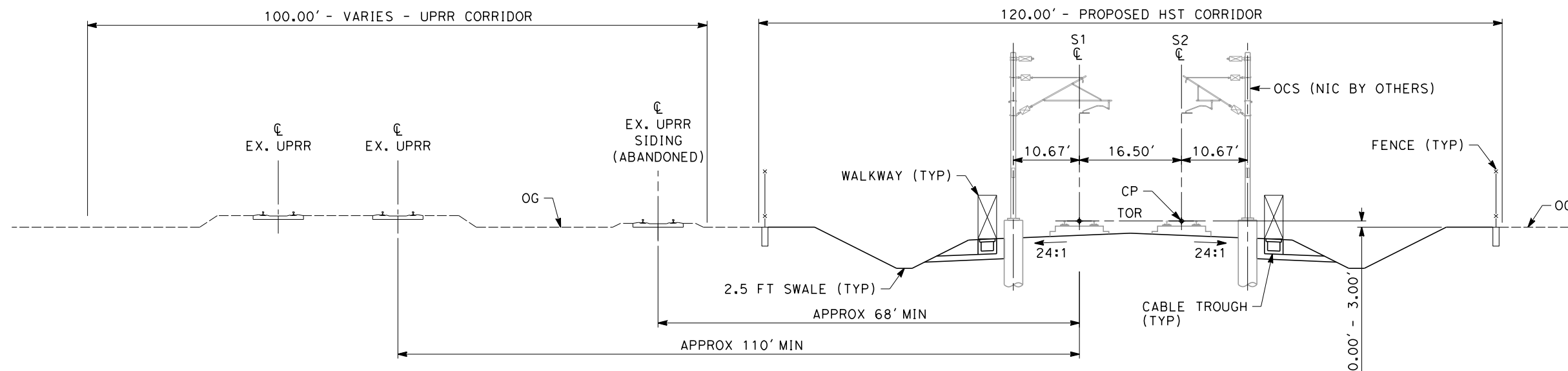


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
TRACK GUIDEWAY  
KEY MAP

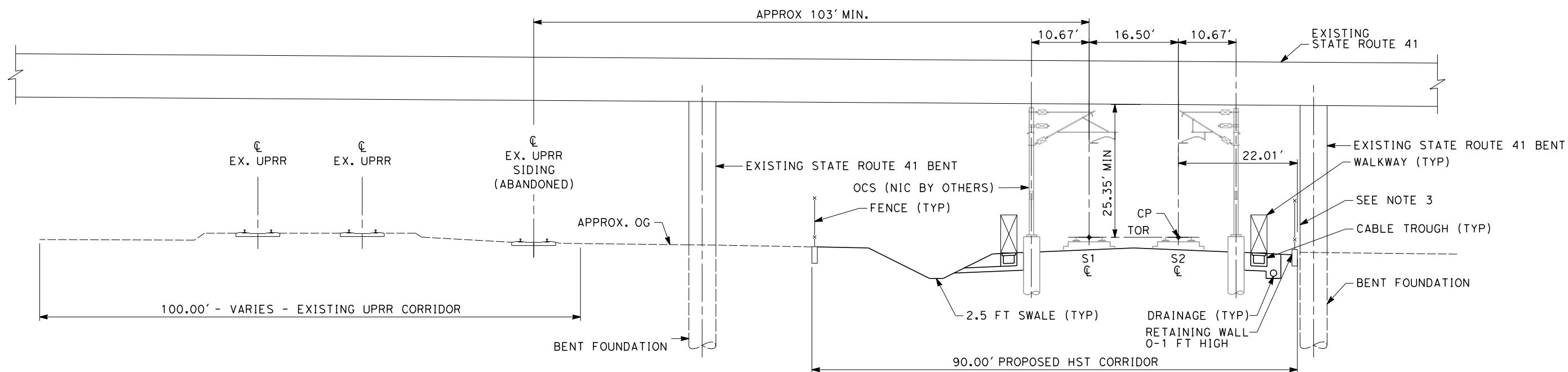
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DRAWING NO. TT-B0010
SCALE AS SHOWN
SHEET NO.

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### SECTION 22

"S" 11030+00 THROUGH 11037+00  
"S" 11039+50 THROUGH 11069+40  
TWIN TRACK - AT GRADE

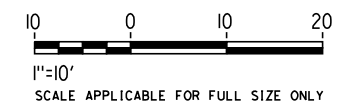


### SECTION 23

"S" 11037+00 THROUGH 11039+50  
TWIN TRACK - AT GRADE UNDER STATE ROUTE 41

#### NOTES:

1. TRACKFORM SHOWN FOR INFORMATION ONLY (NIC BY OTHERS).
2. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES.
3. HST DERAILMENT CONTAINMENT OR PIER PROTECTION MAY BE REQUIRED. TO BE DETERMINED THROUGH A SITE SPECIFIC HAZARD ANALYSIS.



## ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

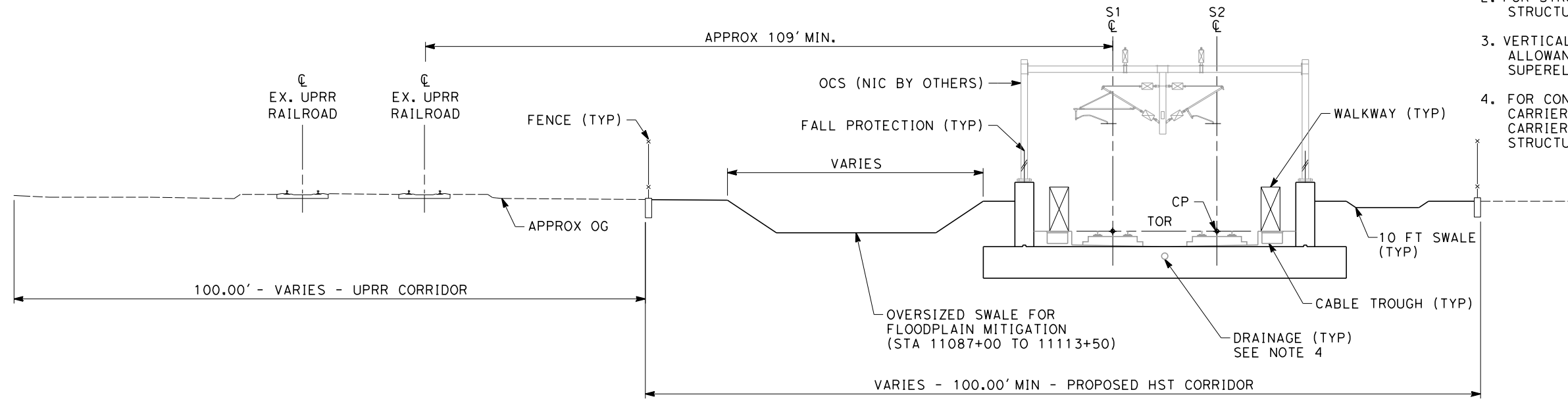


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
TRACK GUIDEWAY  
TYPICAL SECTIONS

CONTRACT NO.
DRAWING NO. TT-D3012
SCALE AS SHOWN
SHEET NO.

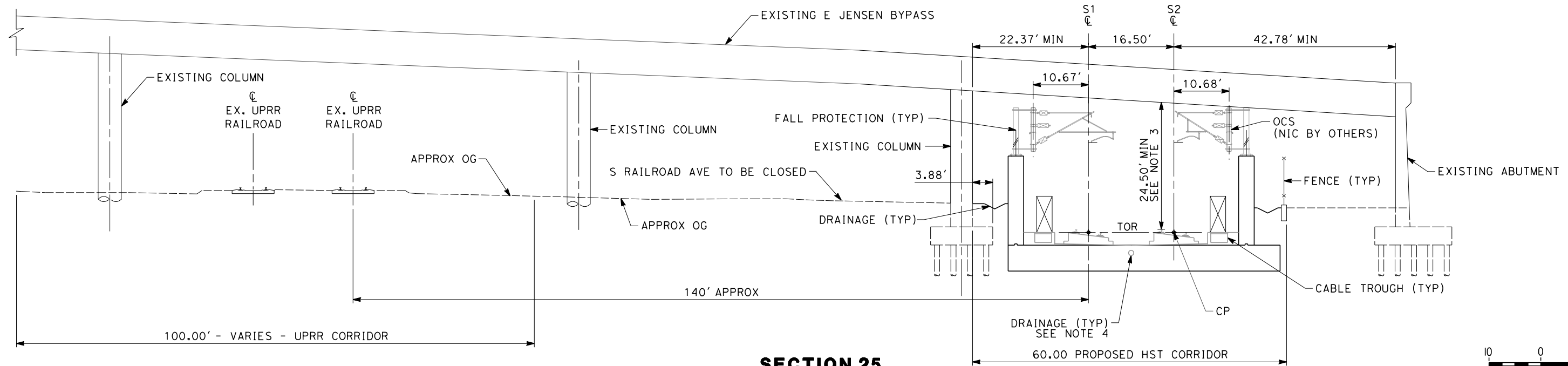


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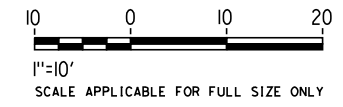


- NOTES:**
1. TRACKFORM SHOWN FOR INFORMATION ONLY (NIC BY OTHERS).
  2. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL TYPICAL SECTIONS.
  3. VERTICAL CLEARANCE INCLUDES ALLOWANCE FOR UP TO 7 INCHES OF SUPERELEVATION.
  4. FOR CONNECTION TO LONGITUDINAL CARRIER DRAIN AND LONGITUDINAL CARRIER DRAIN LOCATION SEE STRUCTURAL TYPICAL SECTIONS.



**SECTION 24**  
"S" 11069+40 THROUGH 11120+25  
"S" 11122+40 THROUGH 11137+00  
TWIN TRACK - IN TRENCH



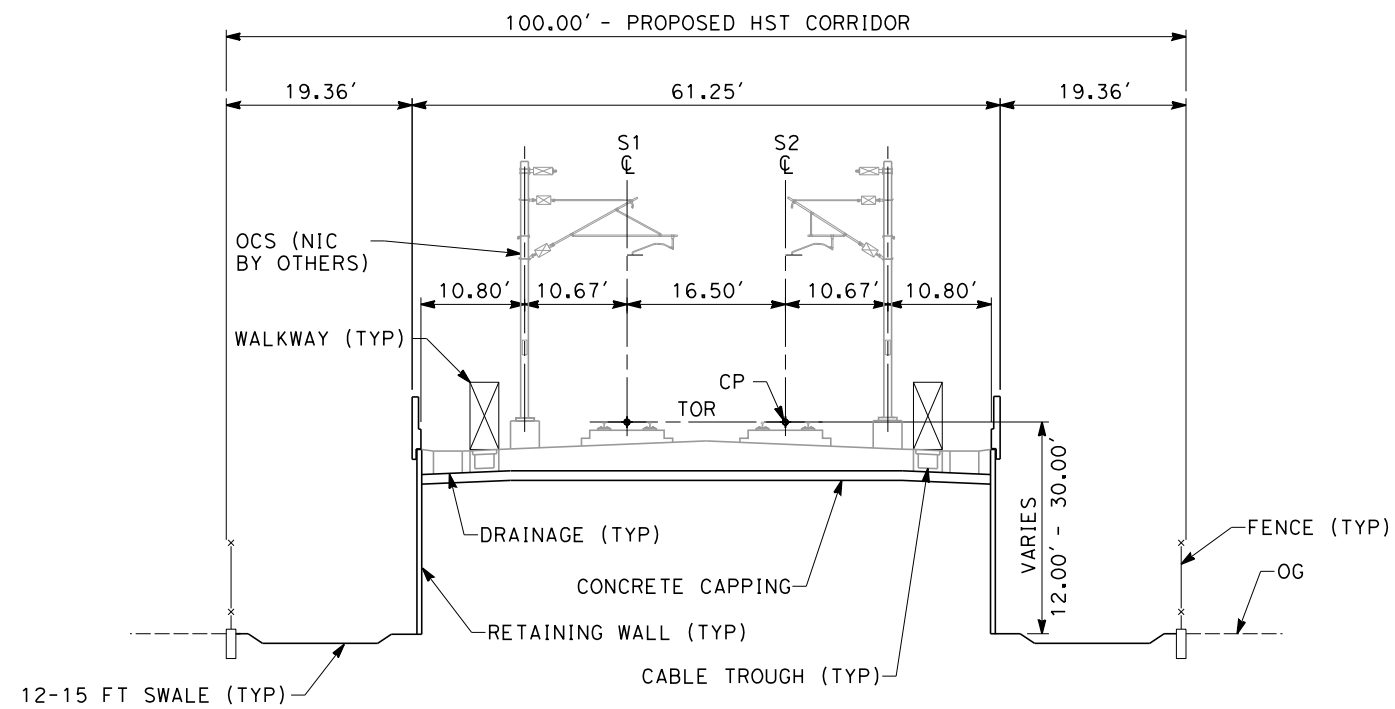
**SECTION 25**  
"S" 11120+25 THROUGH 11122+40  
TWIN TRACK - IN TRENCH UNDER E JENSEN AVE



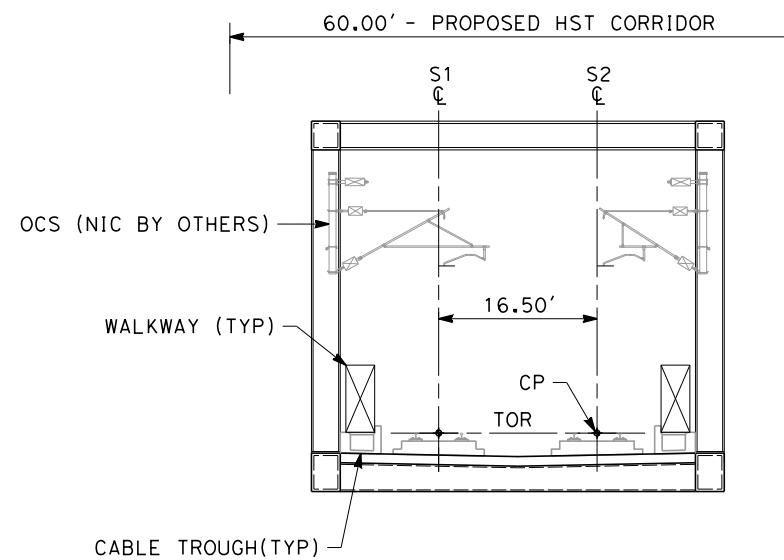
**ADDENDUM 3 - RFP HSR 11-16**

						DESIGNED BY K. SEYMOUR	<b>PROPOSED PRELIMINARY DESIGN</b>  <b>NOT FOR CONSTRUCTION</b>	 	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b> PACKAGE 1C TRACK GUIDEWAY TYPICAL SECTIONS	CONTRACT NO.
						DRAWN BY P. TONKIN				DRAWING NO. TT-D3013
						CHECKED BY D. HUNT				SCALE AS SHOWN
						IN CHARGE R. COFFIN				SHEET NO.
						DATE 06/06/12				
REV	DATE	BY	CHK	APP	DESCRIPTION					

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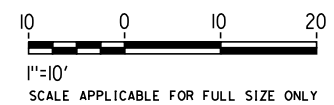
**SECTION 26**  
"S" 11144+50 THROUGH 11152+30  
"S" 11216+00 THROUGH 11230+00  
TWIN TRACK - RETAINED EMBANKMENT WITH OPEN DRAINAGE





**SECTION 27**  
"S" 11152+30 THROUGH 11155+40  
"S" 11191+50 THROUGH 11200+05  
TWIN TRACK - AERIAL STEEL TRUSS

**NOTES:**

1. TRACKFORM SHOWN FOR INFORMATION ONLY (NIC BY OTHERS).
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3. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL TYPICAL SECTIONS.

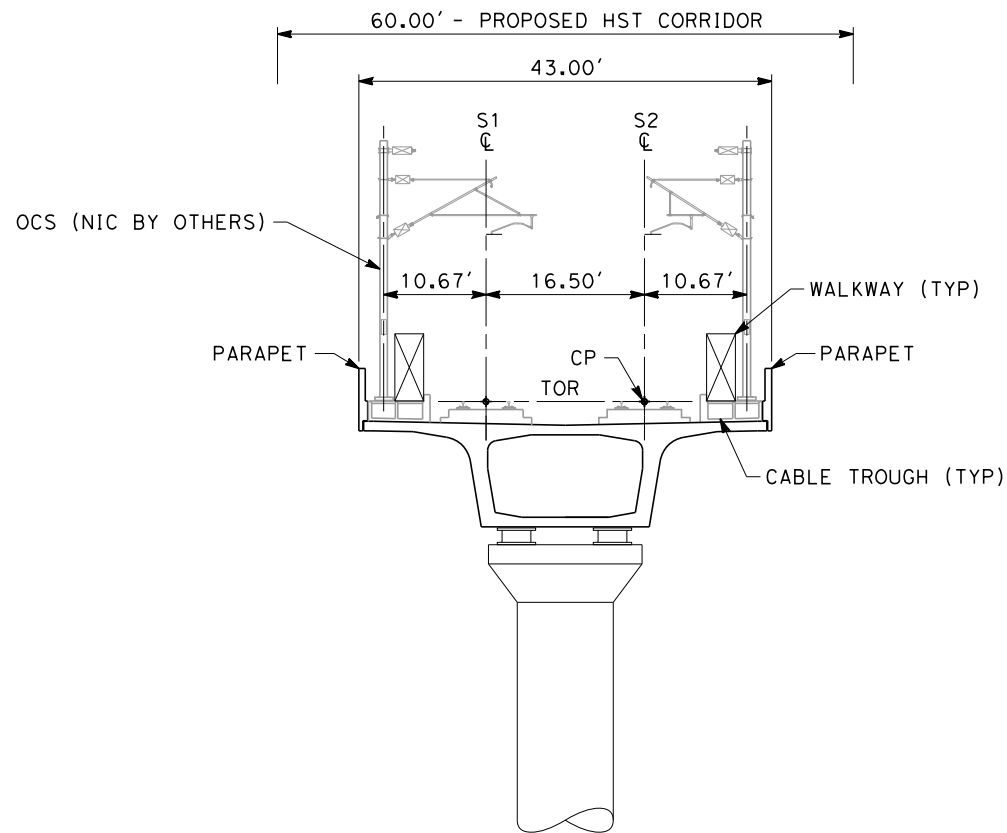


**ADDENDUM 3 - RFP HSR 11-16**

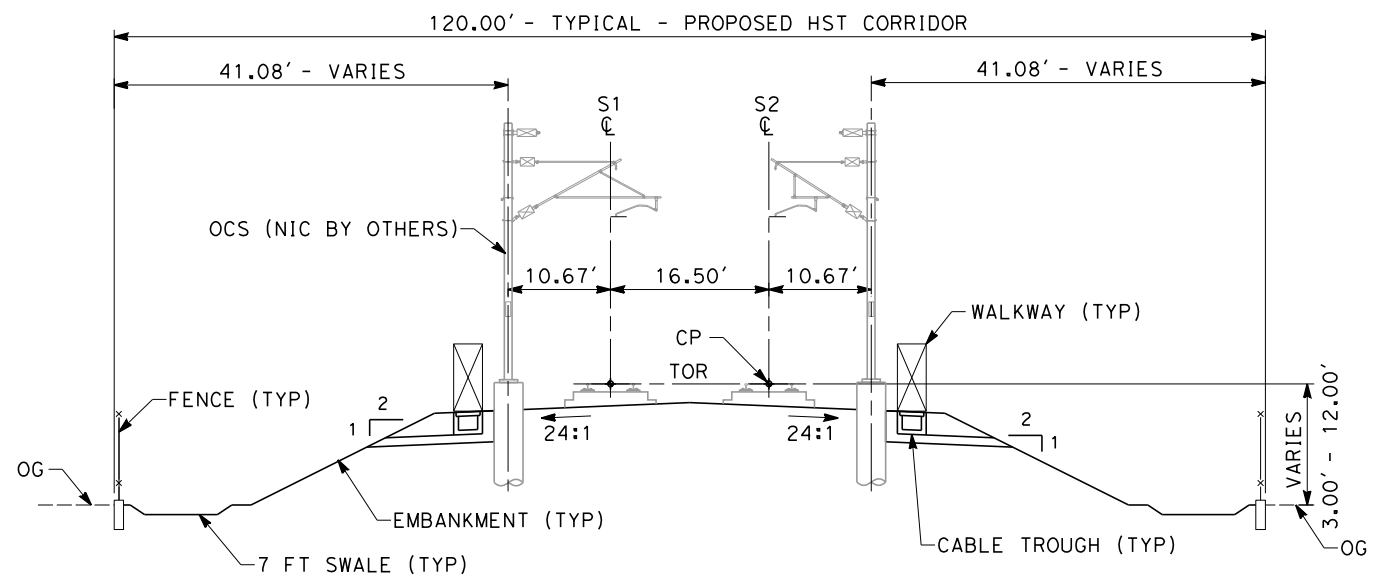
						DESIGNED BY K. SEYMOUR	<b>PROPOSED PRELIMINARY DESIGN</b>  <b>NOT FOR CONSTRUCTION</b>	 	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b> PACKAGE 1C TRACK GUIDEWAY TYPICAL SECTIONS	CONTRACT NO.	
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						CHECKED BY D. HUNT				SCALE AS SHOWN	
						IN CHARGE R. COFFIN				SHEET NO.	
						DATE 06/06/12					
REV	DATE	BY	CHK	APP	DESCRIPTION						



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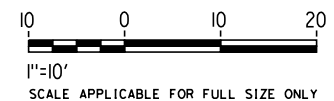
**SECTION 28**  
"S" 11155+40 THROUGH 11191+50  
"S" 11200+05 THROUGH 11216+00  
TWIN TRACK - AERIAL STRUCTURE



**SECTION 29**  
"S" 11137+00 THROUGH 11144+50  
"S" 11230+00 THROUGH 11237+00  
"S" 11237+50 THROUGH 11257+00  
TWIN TRACK - EMBANKMENT WITH OPEN DRAINAGE

**NOTES:**

1. TRACKFORM SHOWN FOR INFORMATION ONLY (NIC BY OTHERS).
2. SUPERELEVATION IS NOT SHOWN. THE AMOUNT OF APPLIED SUPERELEVATION IS SHOWN IN THE CURVE DATA TABLES.
3. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL TYPICAL SECTIONS.



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 06/06/12

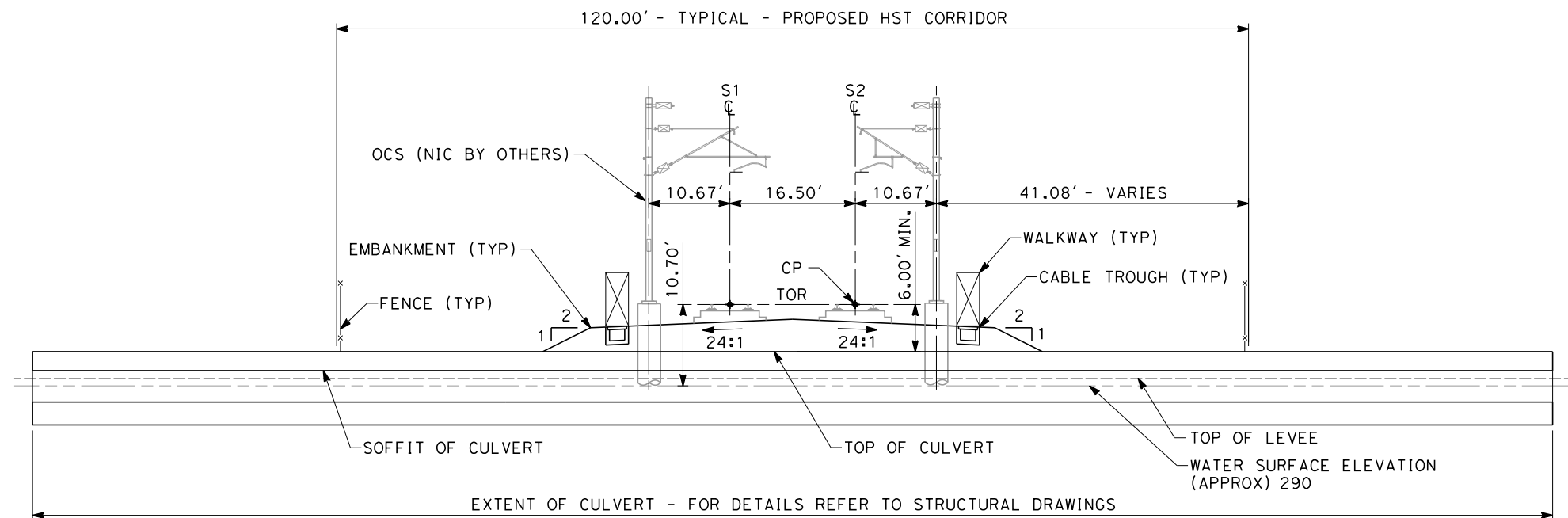
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<b>NOT FOR CONSTRUCTION</b>



<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b>
PACKAGE 1C TRACK GUIDEWAY TYPICAL SECTIONS

CONTRACT NO.
DRAWING NO. TT-D3015
SCALE AS SHOWN
SHEET NO.

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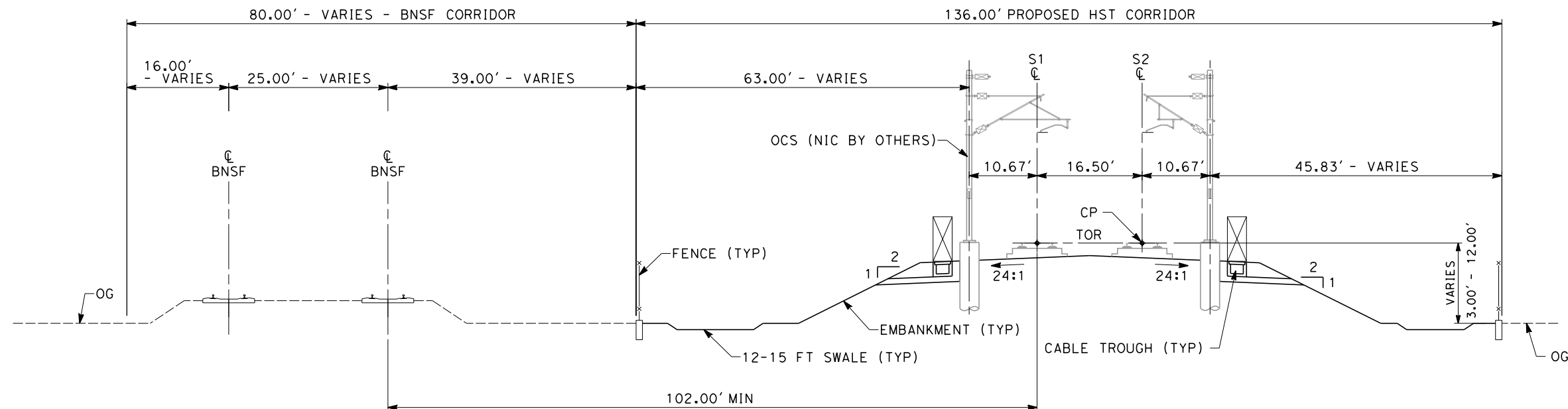


**NOTES:**

1. TRACKFORM SHOWN FOR INFORMATION ONLY (NIC BY OTHERS).
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3. FOR STRUCTURE DIMENSIONS SEE STRUCTURAL TYPICAL SECTIONS.

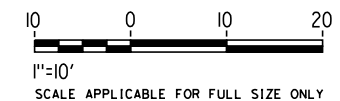
**SECTION 30**

"S" 11237+00 THROUGH 11237+50  
TWIN TRACK - AT GRADE OVER CENTRAL CANAL



**SECTION 31**

"S" 11257+00 THROUGH 11300+00  
TWIN TRACK - AT GRADE ADJACENT TO BNSF WITH OPEN DRAINAGE



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 06/06/12

<b>PROPOSED PRELIMINARY DESIGN</b>
<b>NOT FOR CONSTRUCTION</b>



<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b>
PACKAGE 1C TRACK GUIDEWAY TYPICAL SECTIONS

CONTRACT NO.
DRAWING NO. TT-D3016
SCALE AS SHOWN
SHEET NO.



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NOTES:

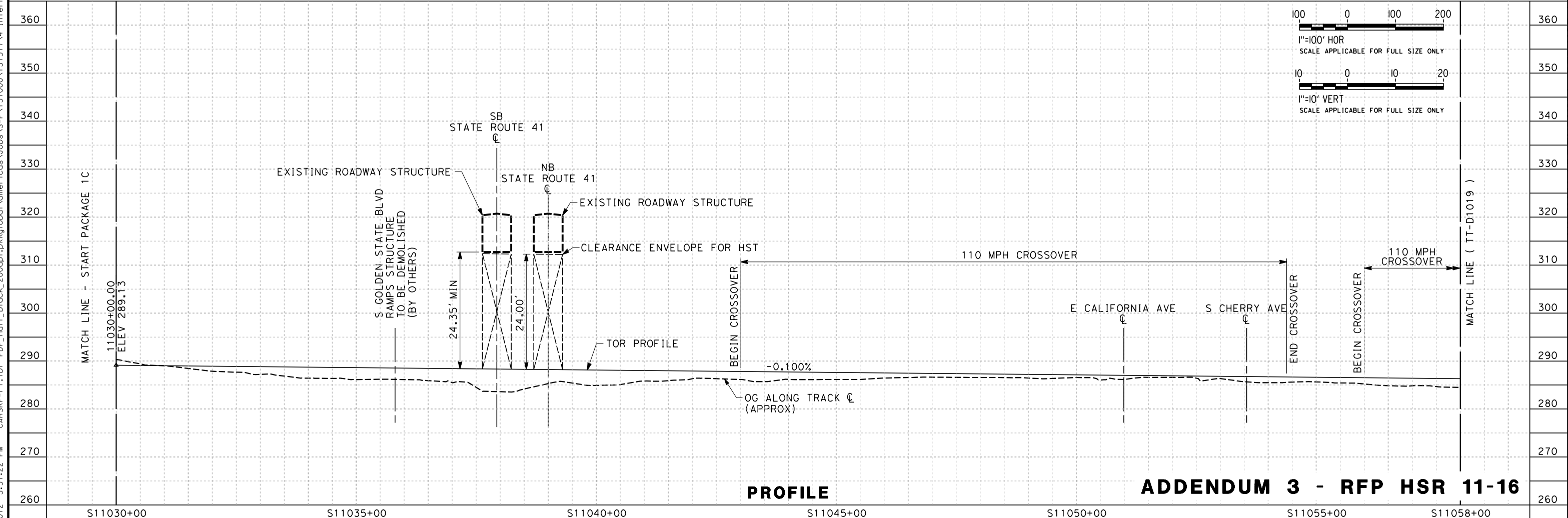
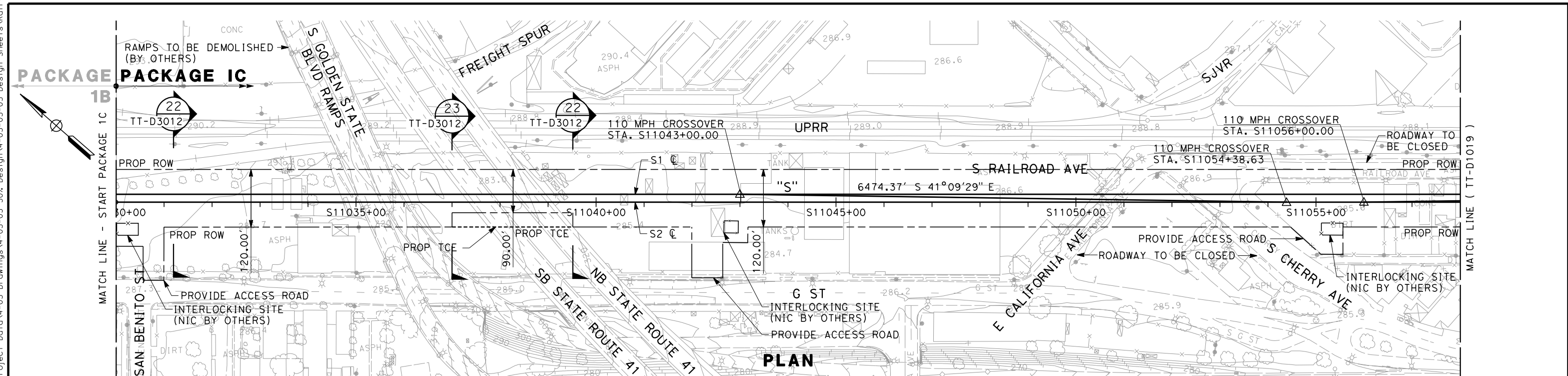
1. THE S1 LINE IS OFFSET TO S2 LINE BY 16.50 FEET.

TRACK GEOMETRY DATA ALONG SOUTHBOUND(S2) TRACK CENTERLINE													
CURVE NO.	DESCRIPTION	STATION	NORTHING	EASTING	BEARING	DISTANCE (FT)	R (FT)	LC (FT)	SPIRAL TYPE	Ls (FT)	Ea (in)	Eu (in)	V (MPH)
105	POB	S11030+00.00	2148252.47	6331017.13	S41°09'29"E	6474.37			HALF SINE	3000.00			250
	TS	S11094+74.37	2143377.94	6335278.18									220
	SC	S11124+74.37	2141078.92	6337204.40									220
	CS	S11252+15.32	2182554.13	6300172.52			21288.50	12740.94			6.75	2.34	220
	ST	S11277+15.32	2126782.89	6341512.64	S0°32'03"W	2284.69			HALF SINE	2500.00			220
	POT	S11300+00.00	2124498.31	6341491.34									250

ADDENDUM 3 - RFP HSR 11-16

						DESIGNED BY K. SEYMOUR	<b>PROPOSED PRELIMINARY DESIGN</b>	 <b>CALIFORNIA HIGH-SPEED TRAIN</b>	 <b>CALIFORNIA</b> <i>HIGH-SPEED RAIL AUTHORITY</i>	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b> PACKAGE 1C TRACK GUIDEWAY HORIZONTAL ALIGNMENT DATA	CONTRACT NO.
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						CHECKED BY D. HUNT					SCALE AS SHOWN
						IN CHARGE R. COFFIN					SHEET NO.
						DATE 06/06/12					
REV	DATE	BY	CHK	APP	DESCRIPTION						

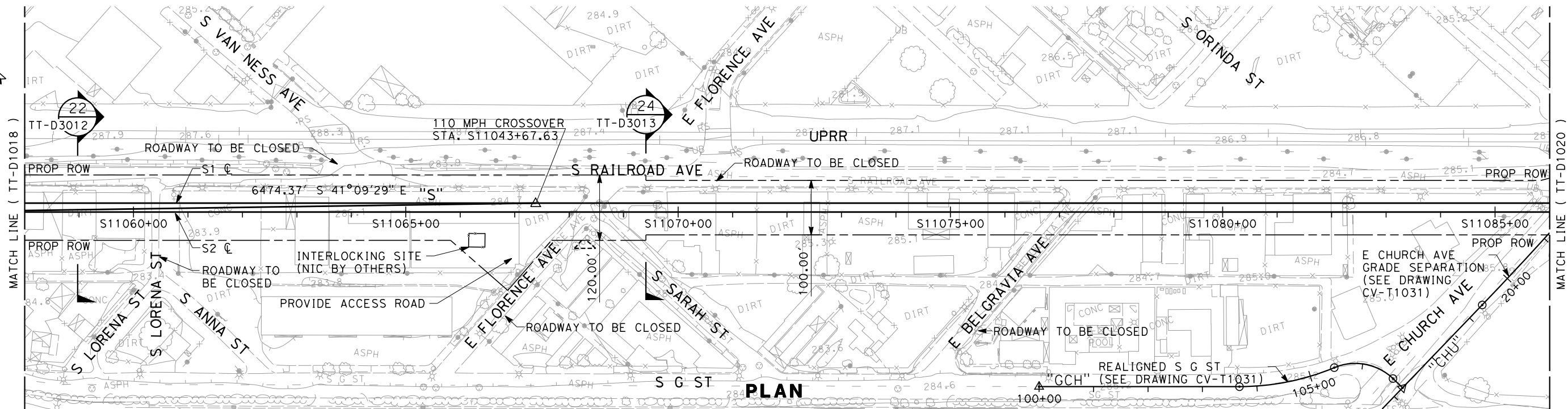
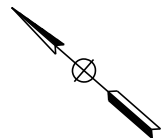
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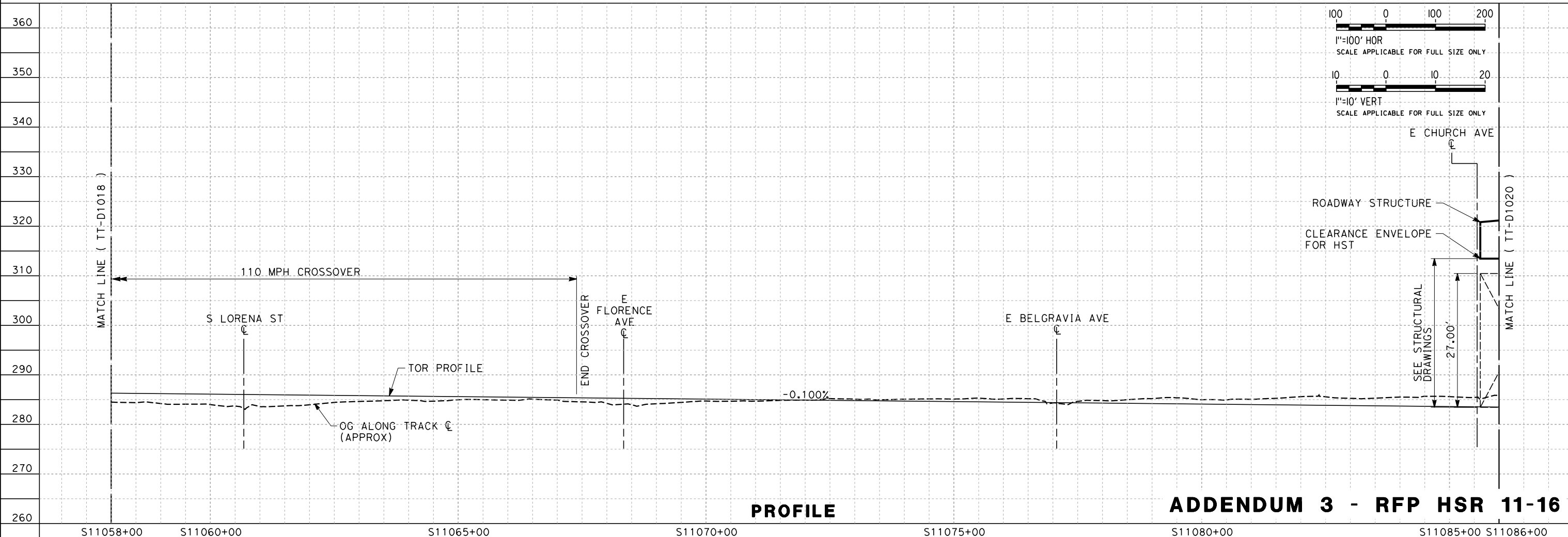
<div>REVDATEBYCHKAPPDESCRIPTION</div>					<div>DESIGNED BY K. SEYMOUR</div> <div>DRAWN BY P. TONKIN</div> <div>CHECKED BY D. HUNT</div> <div>IN CHARGE R. COFFIN</div> <div>DATE 06/06/12</div>	<div>PROPOSED PRELIMINARY DESIGN</div> <div>NOT FOR CONSTRUCTION</div>	<div>URS   HMM   ARUP</div> <div>CALIFORNIA HIGH-SPEED TRAIN</div>	<div>CALIFORNIA HIGH-SPEED RAIL AUTHORITY</div>	<div>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</div> <div>PACKAGE 1C TRACK GUIDEWAY PLAN AND PROFILE STA. 11030+00 TO STA. 11058+00</div>	<div>CONTRACT NO.</div> <div>DRAWING NO. TT-D1018</div> <div>SCALE AS SHOWN</div> <div>SHEET NO.</div>
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PLAN



PROFILE

ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

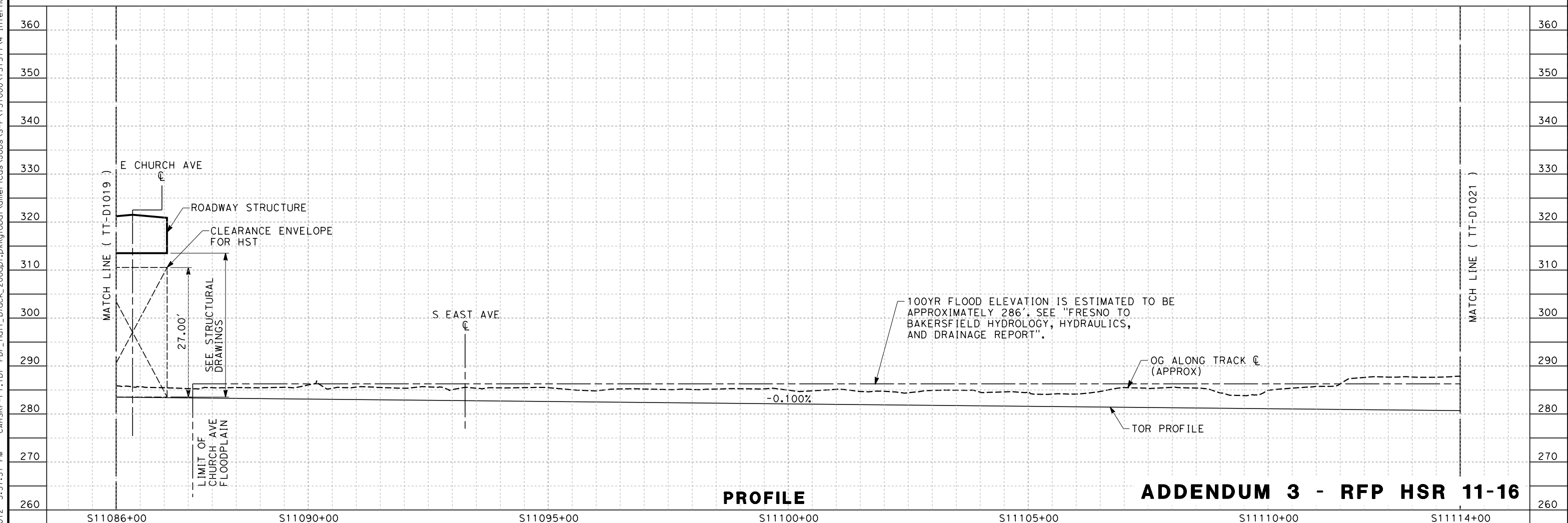
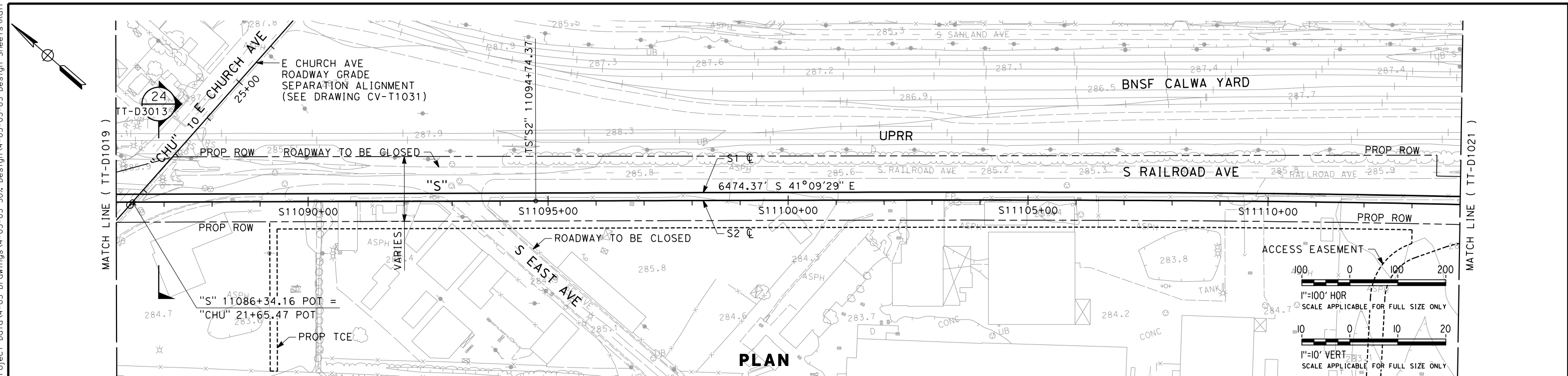


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
TRACK GUIDEWAY  
PLAN AND PROFILE  
STA. 11058+00 TO STA. 11086+00

CONTRACT NO.
DRAWING NO. TT-D1019
SCALE AS SHOWN
SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16

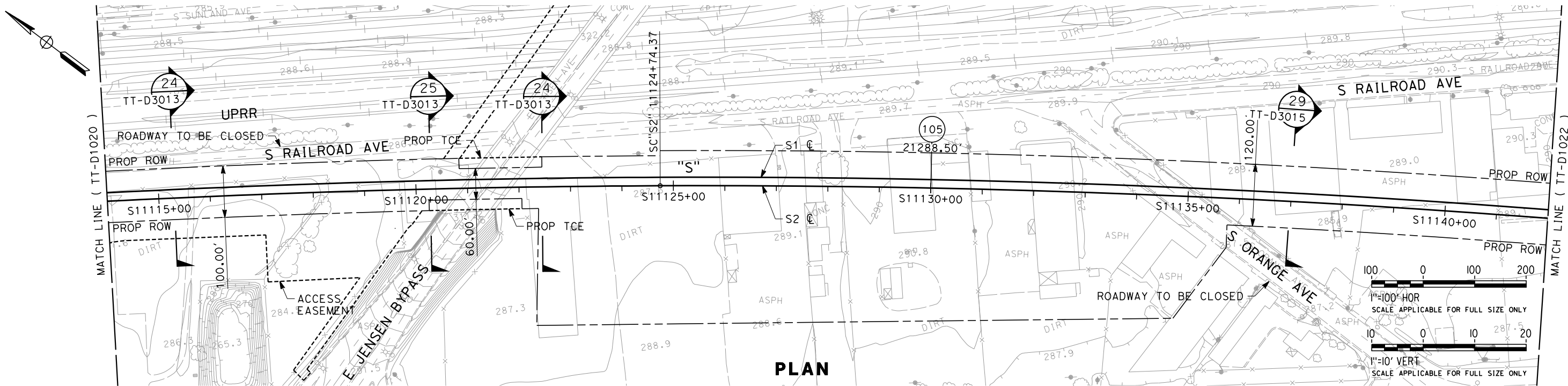
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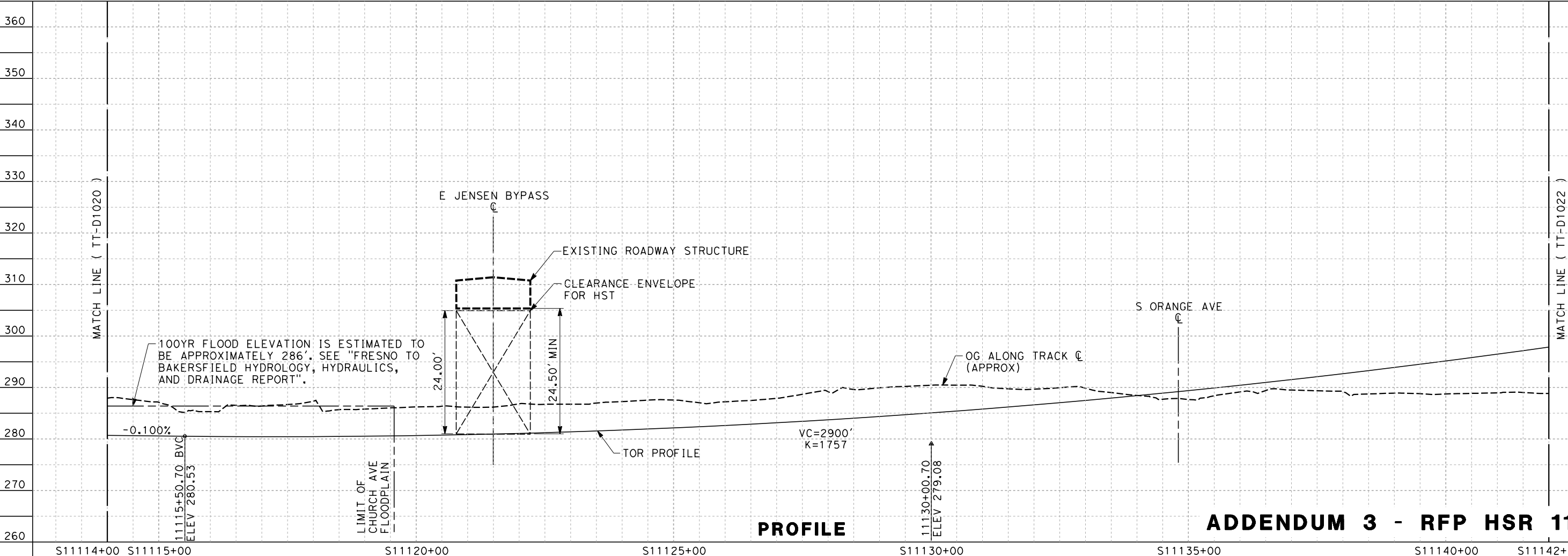
<div>DESIGNED BY K. SEYMOUR</div> <div>DRAWN BY P. TONKIN</div> <div>CHECKED BY D. HUNT</div> <div>IN CHARGE R. COFFIN</div> <div>DATE 06/06/12</div>					<div>PROPOSED PRELIMINARY DESIGN</div> <div>NOT FOR CONSTRUCTION</div>			<div>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION PACKAGE 1C TRACK GUIDEWAY PLAN AND PROFILE STA. 11086+00 TO STA. 11114+00</div>	CONTRACT NO.	
<div>REV    DATE    BY    CHK    APP    DESCRIPTION</div>									DRAWING NO. TT-D1020	
							SCALE AS SHOWN			
							SHEET NO.			

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PLAN



PROFILE

ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
K. SEYMOUR  
DRAWN BY  
P. TONKIN  
CHECKED BY  
D. HUNT  
IN CHARGE  
R. COFFIN  
DATE  
06/06/12

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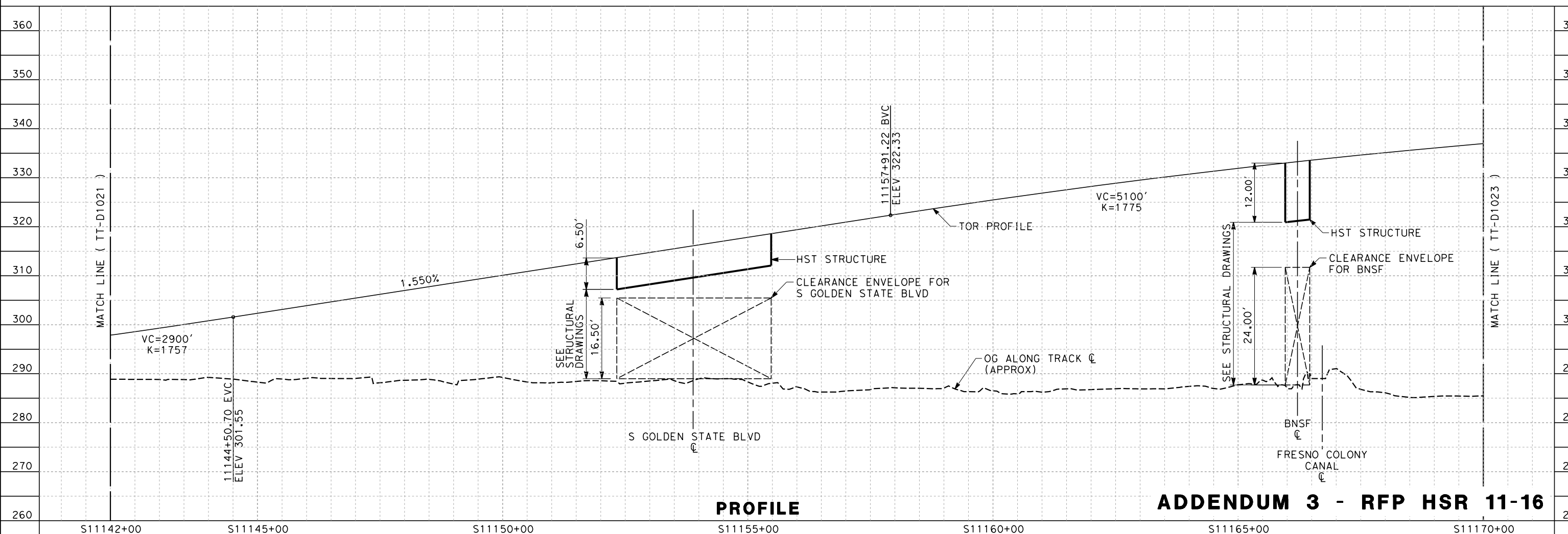
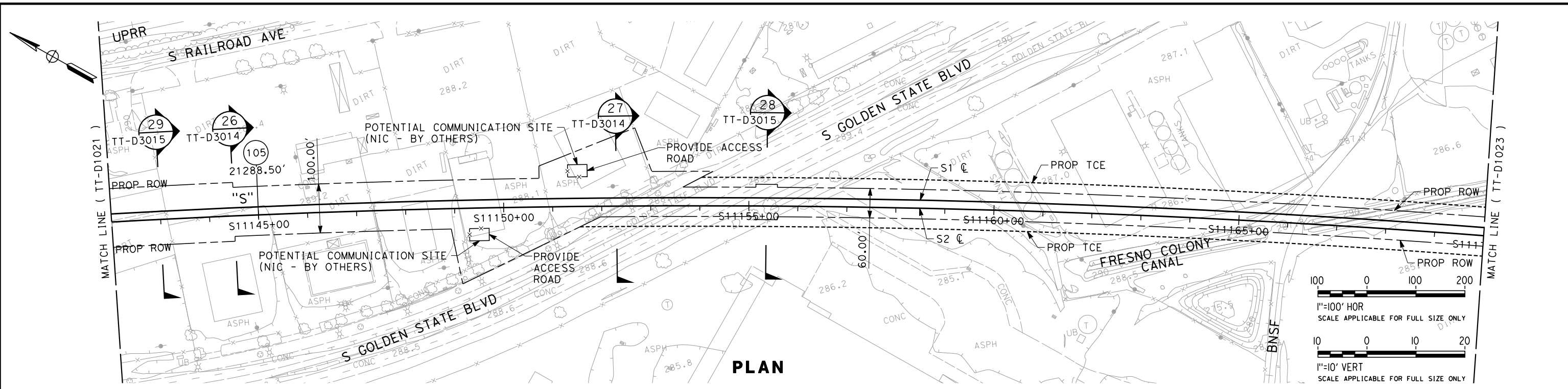
CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
TRACK GUIDEWAY  
PLAN AND PROFILE  
STA. 11114+00 TO STA. 11142+00

CONTRACT NO.  
DRAWING NO.  
TT-D1021  
SCALE  
AS SHOWN  
SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16



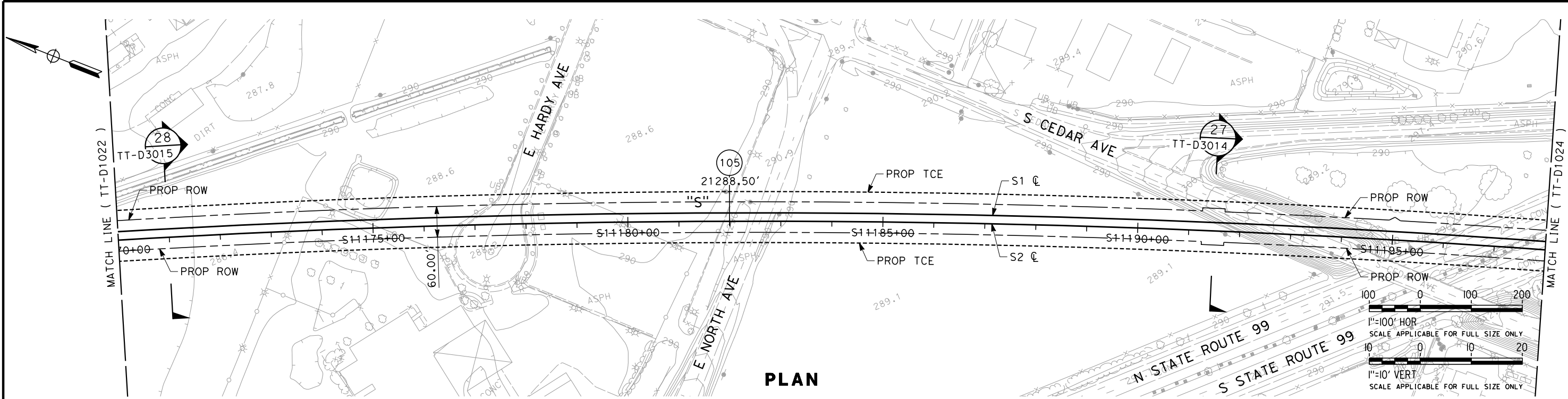
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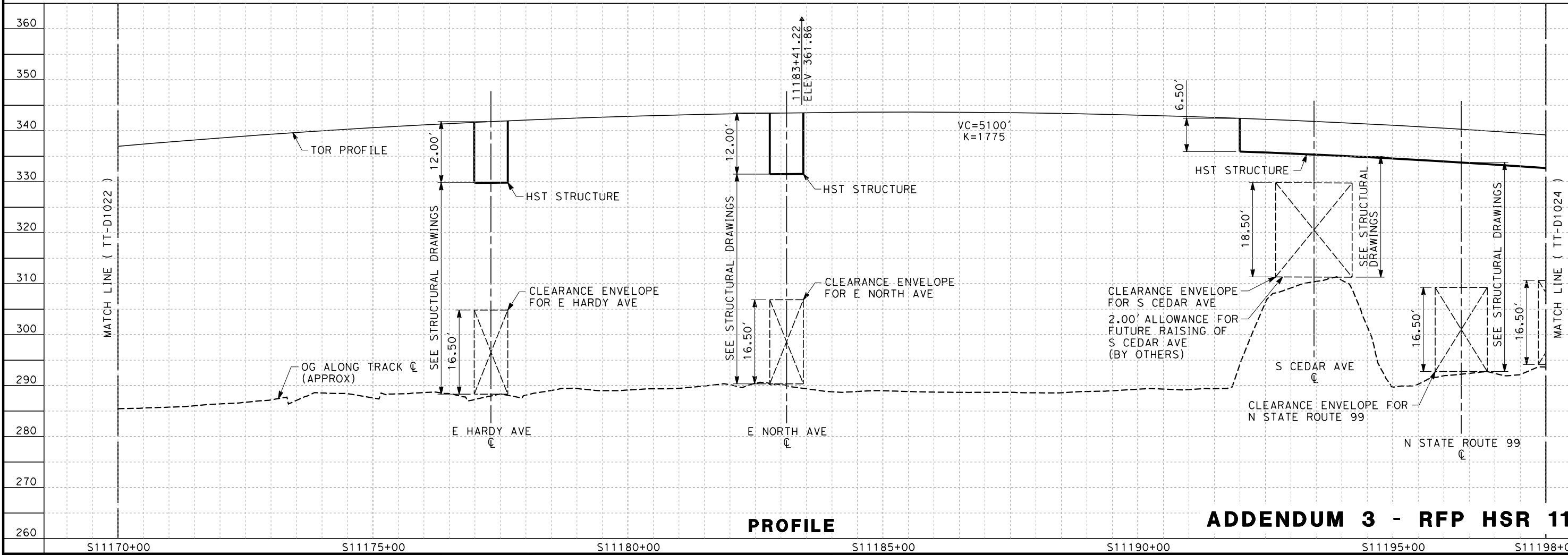
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REV	DATE	BY	CHK	APP	DESCRIPTION			

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PLAN



PROFILE

ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 06/06/12

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CONSTRUCTION**



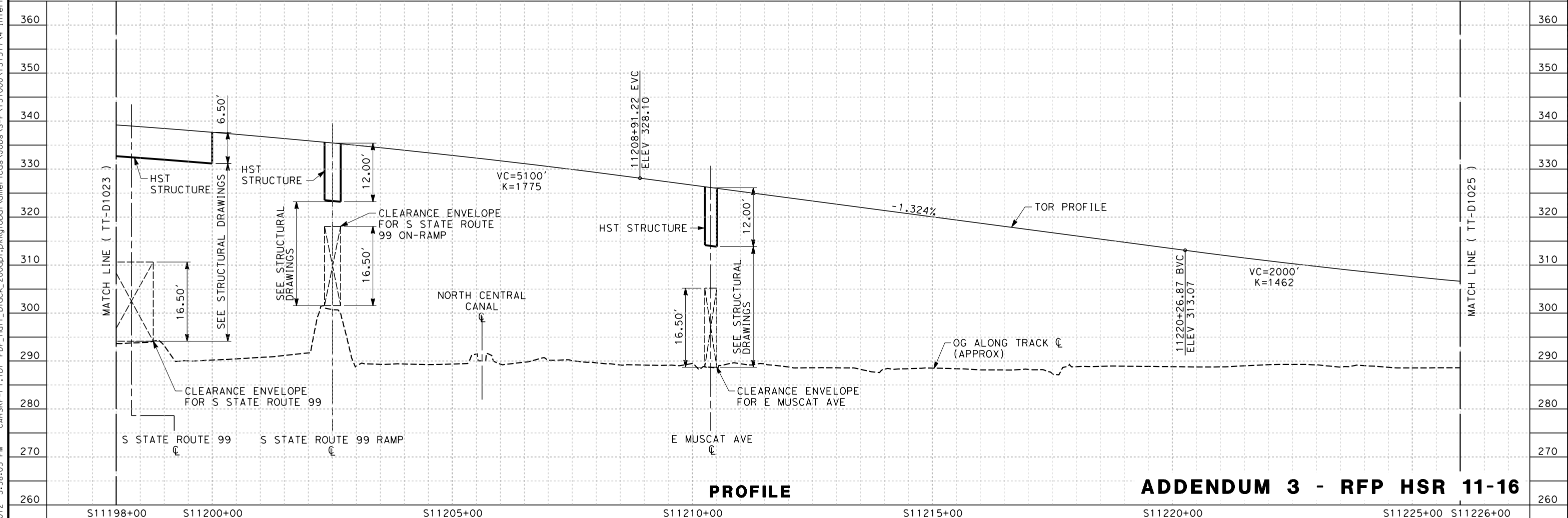
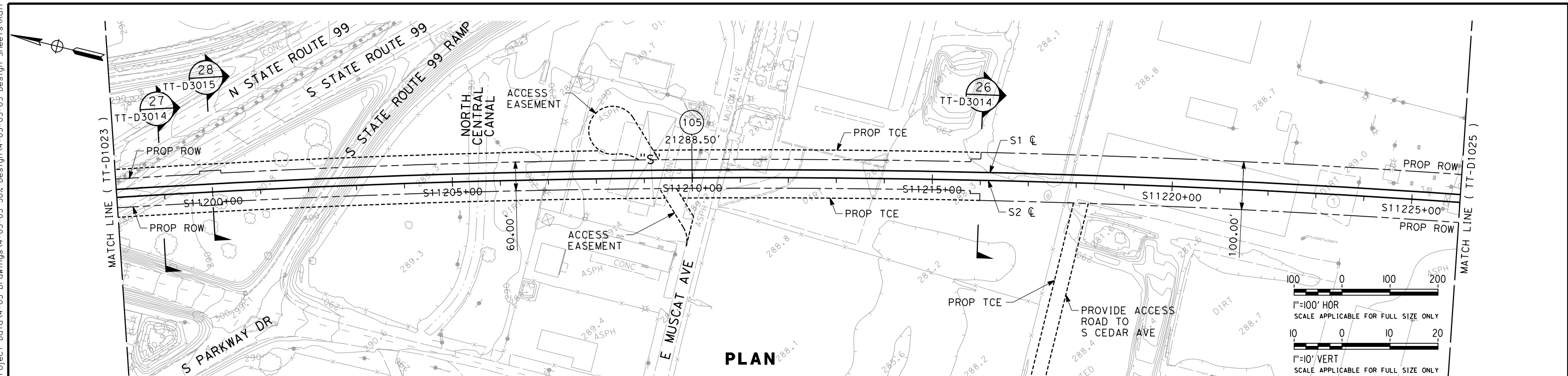
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
TRACK GUIDEWAY  
PLAN AND PROFILE  
STA. 11170+00 TO STA. 11198+00

CONTRACT NO.
DRAWING NO. TT-D1023
SCALE AS SHOWN
SHEET NO.

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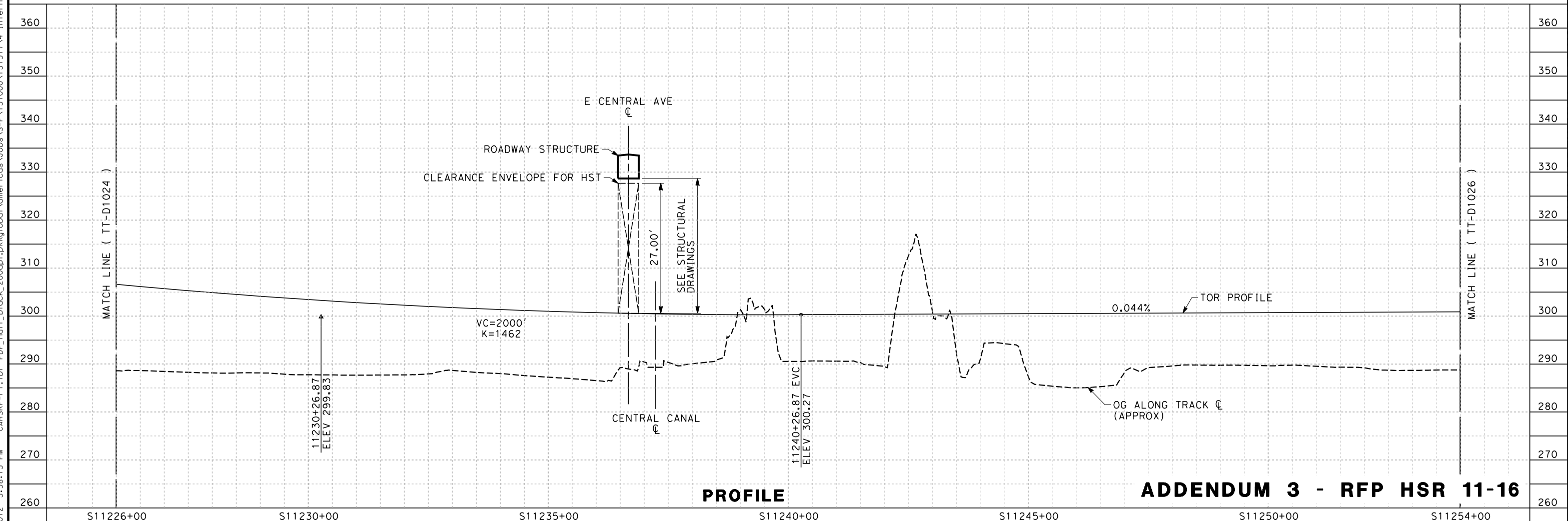
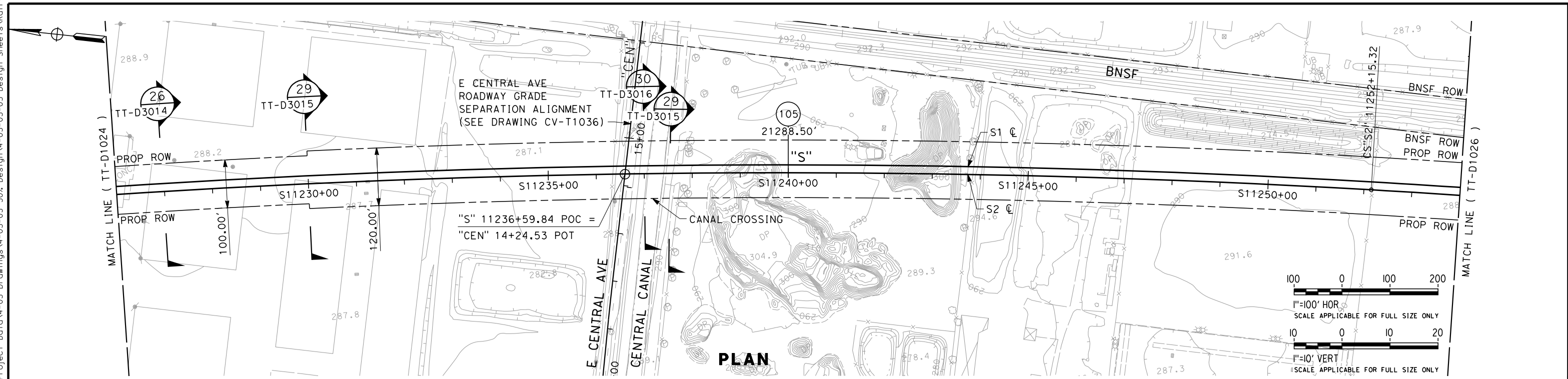




<div>DESIGNED BY K. SEYMOUR DRAWN BY P. TONKIN CHECKED BY D. HUNT IN CHARGE R. COFFIN DATE 06/06/12</div>					<div>PROPOSED PRELIMINARY DESIGN  NOT FOR CONSTRUCTION</div>		<div>URS   HMM   ARUP CALIFORNIA HIGH-SPEED TRAIN</div>		<div>CALIFORNIA HIGH-SPEED RAIL AUTHORITY</div>		<div>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION PACKAGE 1C TRACK GUIDEWAY PLAN AND PROFILE STA. 11198+00 TO STA. 11226+00</div>			<div>CONTRACT NO.  DRAWING NO. TT-D1024 SCALE AS SHOWN SHEET NO.</div>	
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06/29/2012 ADDENDUM 3 - RFP HSR 11-16



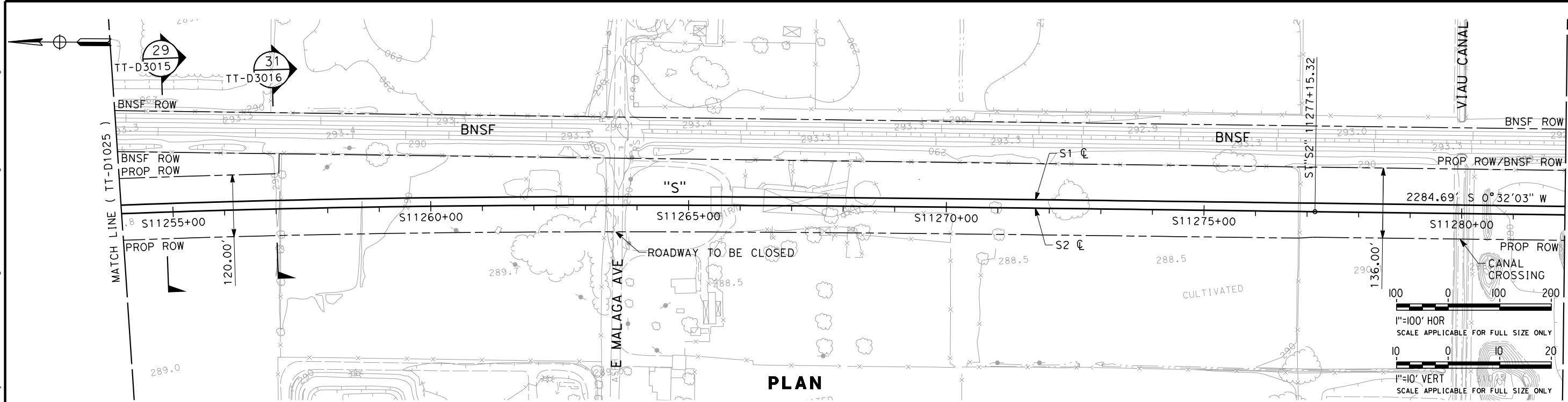
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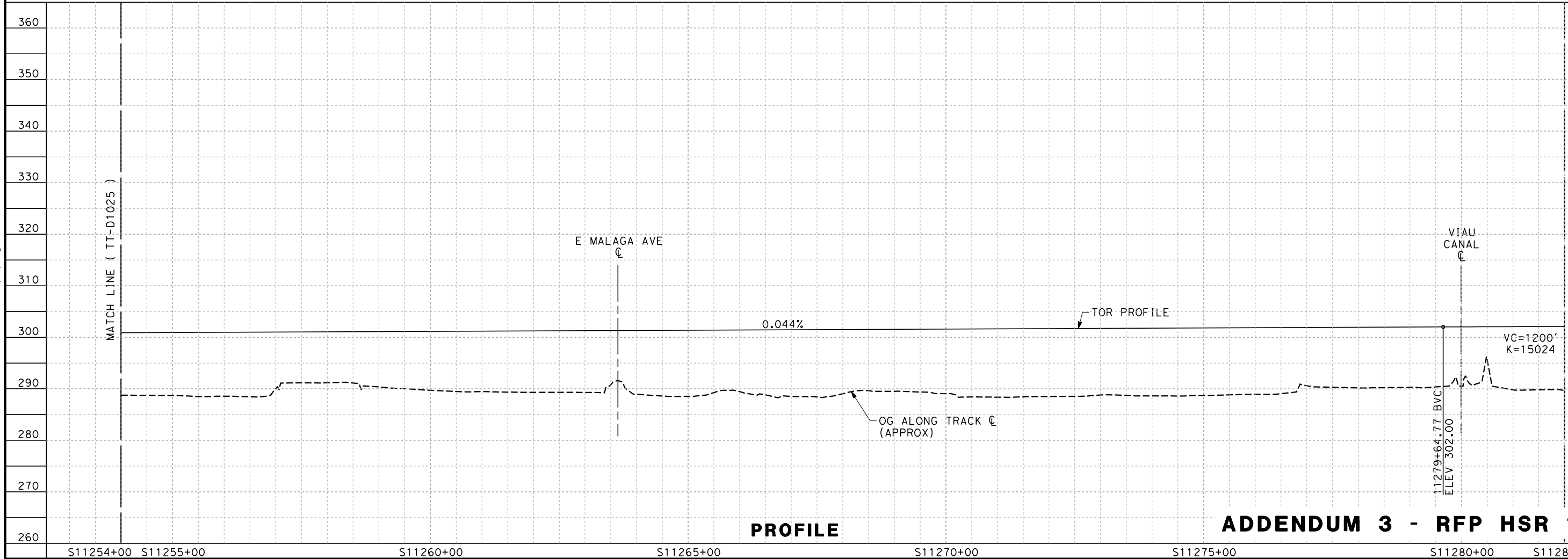
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						IN CHARGE R. COFFIN					SHEET NO.	
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 06/06/12						

06/29/2012 ADDENDUM 3 - RFP HSR 11-16

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PLAN



PROFILE

ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

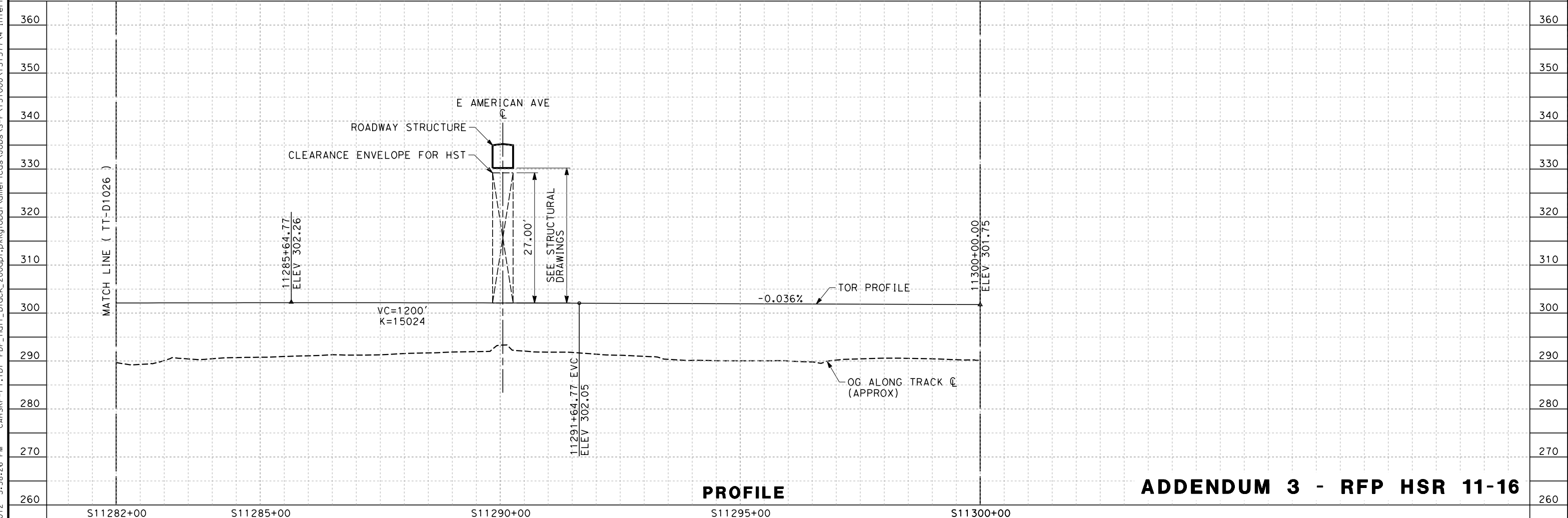
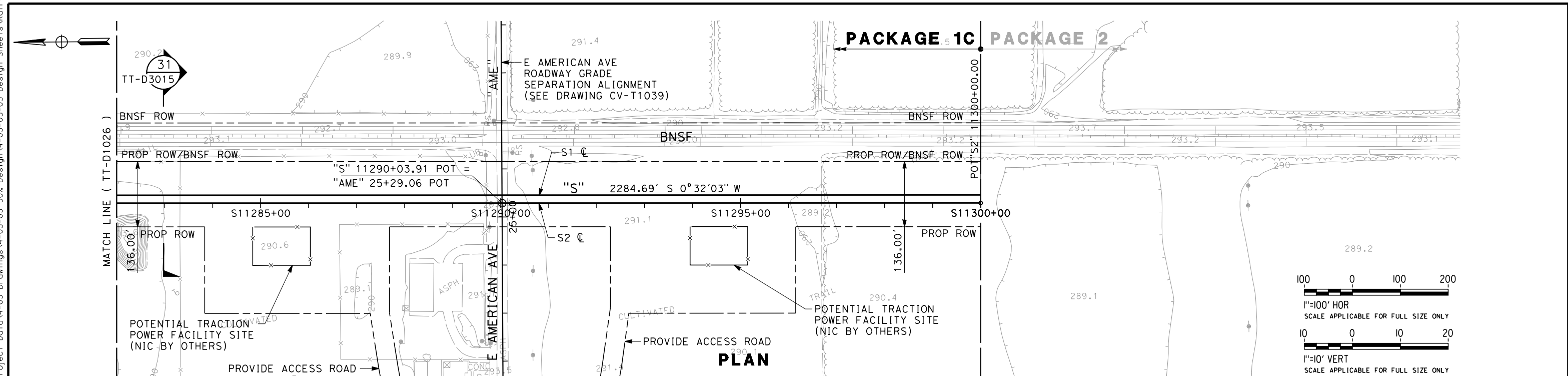




**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
TRACK GUIDEWAY  
PLAN AND PROFILE  
STA. 11254+00 TO STA. 11282+00

CONTRACT NO.
DRAWING NO. TT-D1026
SCALE AS SHOWN
SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16

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						DESIGNED BY K. SEYMOUR	PROPOSED PRELIMINARY DESIGN  NOT FOR CONSTRUCTION			CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION PACKAGE 1C TRACK GUIDEWAY PLAN AND PROFILE STA. 11282+00 TO STA. 11300+00	CONTRACT NO.	
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						CHECKED BY D. HUNT					SCALE AS SHOWN	
						IN CHARGE R. COFFIN					SHEET NO.	
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 06/06/12						



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VOLUME 2 - TRACK STRUCTURES

DRAWING No	DRAWING DESCRIPTION
GE-A0016	PACKAGE 1C - TRACK STRUCTURES - INDEX OF DRAWINGS
ST-B0011	PACKAGE 1C - TRACK STRUCTURES - GENERAL NOTES - SHEET 1 OF 2
ST-B0012	PACKAGE 1C - TRACK STRUCTURES - GENERAL NOTES - SHEET 2 OF 2
ST-B0014	PACKAGE 1C - TRACK STRUCTURES - KEY MAP
ST-Y3005	PACKAGE 1C - TRACK STRUCTURES - JENSEN TRENCH - TYPICAL SECTIONS
ST-Y3006	PACKAGE 1C - TRACK STRUCTURES - JENSEN TRENCH - TYPICAL SECTIONS
ST-Y3007	PACKAGE 1C - TRACK STRUCTURES - JENSEN TRENCH - TYPICAL SECTIONS
ST-Y3008	PACKAGE 1C - TRACK STRUCTURES - JENSEN TRENCH - TYPICAL SECTIONS
ST-Y1010	PACKAGE 1C - TRACK STRUCTURES - JENSEN TRENCH - PLAN AND ELEVATION
ST-Y1011	PACKAGE 1C - TRACK STRUCTURES - JENSEN TRENCH - PLAN AND ELEVATION
ST-Y1012	PACKAGE 1C - TRACK STRUCTURES - JENSEN TRENCH - PLAN AND ELEVATION
ST-Y1013	PACKAGE 1C - TRACK STRUCTURES - JENSEN TRENCH - PLAN AND ELEVATION
ST-Y1014	PACKAGE 1C - TRACK STRUCTURES - JENSEN TRENCH - PLAN AND ELEVATION
ST-Y1015	PACKAGE 1C - TRACK STRUCTURES - JENSEN TRENCH - PLAN AND ELEVATION
ST-Y1016	PACKAGE 1C - TRACK STRUCTURES - JENSEN TRENCH - PLAN AND ELEVATION
ST-Y1017	PACKAGE 1C - TRACK STRUCTURES - JENSEN TRENCH - PLAN AND ELEVATION
ST-J3008	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - TYPICAL SECTIONS
ST-J3009	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - TYPICAL SECTIONS
ST-J3010	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - TYPICAL SECTIONS
ST-J3011	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - TYPICAL SECTIONS
ST-J3012	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - TYPICAL SECTIONS
ST-J3013	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - TYPICAL SECTIONS
ST-J3014	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - TYPICAL SECTIONS
ST-J3015	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - TYPICAL SECTIONS
ST-J3016	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - TYPICAL SECTIONS
ST-J3017	PACKAGE 1C - TRACK STRUCTURES - CANAL CULVERTS - TYPICAL SECTIONS
ST-J1001	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - PLAN AND ELEVATION
ST-J1002	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - PLAN AND ELEVATION
ST-J1003	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - PLAN AND ELEVATION
ST-J1004	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - PLAN AND ELEVATION
ST-J1005	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - PLAN AND ELEVATION
ST-J1006	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - PLAN AND ELEVATION
ST-J1007	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - PLAN AND ELEVATION
ST-J1008	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - PLAN AND ELEVATION
ST-J1009	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - PLAN AND ELEVATION
ST-J1010	PACKAGE 1C - TRACK STRUCTURES - FRESNO VIADUCT - PLAN AND ELEVATION

ADDENDUM 3 - RFP HSR 11-16

						DESIGNED BY F. PALERMO	<b>PROPOSED PRELIMINARY DESIGN</b>			<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b> PACKAGE 1C TRACK STRUCTURES INDEX OF DRAWINGS	CONTRACT NO.
						DRAWN BY J. BORGHESI					DRAWING NO. GE-A0016
						CHECKED BY S. BURGESS					SCALE NO SCALE
						IN CHARGE R. COFFIN					SHEET NO.
						DATE 06/06/12					
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HST STRUCTURAL NOTES

A. SPECIFICATIONS FOR DESIGN AND CONSTRUCTION

1. CONSTRUCTION SPECIFICATION SHALL BE THE DESIGN-BUILD STANDARD SPECIFICATION, CALIFORNIA HIGH SPEED TRAIN, JUNE 2011.
2. THE STRUCTURAL DESIGN OF STRUCTURES SUPPORTING HIGH SPEED TRAINS SHALL BE BASED ON THE REQUIREMENTS OF THE CALIFORNIA HIGH SPEED TRAIN AUTHORITY.
3. DESIGN CRITERIA FOR HIGHWAY BRIDGES SHALL BE THE CALIFORNIA BRIDGE DESIGN SPECIFICATION. FOR HIGHWAY BRIDGES PASSING OVER THE HIGH SPEED TRAIN THE BRIDGE DESIGN SPECIFICATION SHALL BE SUPPLEMENTED BY THE CALIFORNIA HIGH SPEED TRAIN REQUIREMENTS FOR SEISMIC DESIGN.
4. DESIGN CRITERIA FOR RAILROAD STRUCTURES NOT SUPPORTING HIGH SPEED TRAINS SHALL BE THE AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION (AREMA) MANUAL FOR RAILWAY ENGINEERING (APRIL 2008). FOR RAILROAD BRIDGES PASSING OVER THE HIGH SPEED TRAIN THE BRIDGE DESIGN SPECIFICATION SHALL BE SUPPLEMENTED BY THE CALIFORNIA HIGH SPEED TRAIN REQUIREMENTS FOR SEISMIC DESIGN.

B. DESIGN METHOD

1. DESIGN SHALL BE PERFORMED TO THE LOAD AND RESISTANCE FACTOR (LRFD) DESIGN METHOD.

C. GENERAL

1. FOR ACRONYMS AND ABBREVIATIONS SEE DRAWING STD-SB-001 THROUGH STD-SB-002.
2. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND ALL OTHER DRAWINGS RELATED TO THE WORK.
3. EMBEDDED ITEMS SUCH AS PIPES, INSERTS, SLEEVES AND CONDUITS, AND ANY RECESSES, NICHES OR OPENINGS REQUIRED FOR UTILITY, ARCHITECTURAL, MECHANICAL AND ELECTRICAL INSTALLATIONS ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS. CONTRACTOR SHALL REFER TO THE UTILITY, ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR THE LOCATIONS AND DETAILS OF THESE ITEMS. CONTRACTOR SHALL REVIEW AND APPROVE ALL PENETRATIONS PRIOR TO CONSTRUCTION. PENETRATIONS WHICH LOCAL THICKENING OF CONCRETE OR STEEL MEMBERS AND /OR SUPPLEMENTAL REINFORCING SHALL BE SHOWN ON THE STRUCTURAL DRAWINGS.
4. THE VERTICAL CONTROL OF ALL TRACK STRUCTURES IS BASED ON THE CONTROL POINT AS DEFINED ON THE CROSS SECTION DRAWINGS.
5. CONTRACTORS ATTENTION IS DIRECTED TO THE AREAS OF SAG VERTICAL CURVES. IN SUCH AREAS CAUTION SHOULD BE EXERCISED THAT THE DIMENSION TO THE INVERT OF CONCRETE OF GUIDEWAY IS NEVER LESS THAN THAT SHOWN FOR INVERT DETAILS.

6. HORIZONTAL CONTROL FOR TRACK STRUCTURES SHOULD BE BASED ON THE VEHICLE CLEARANCE AND EQUIPMENT OPERATION AND MAINTENANCE REQUIREMENTS. CONTRACTOR SHALL EXERCISE NECESSARY CARE TO ASSURE THAT THE STRUCTURES ARE DESIGNED AND CONSTRUCTED TO THE INDICATED ALIGNMENT AND WITHIN THE SPECIFIED CLEARANCE CRITERIA AND TOLERANCES.
7. ALL CONSTRUCTION JOINTS IN EARTH RETAINING STRUCTURES AND IN STRUCTURES BELOW THE FINISH GRADE SHALL CONTAIN CONTINUOUS WATERSTOPS, AND SHALL HAVE REINFORCEMENT CONTINUOUS ACROSS ALL JOINTS. HYDROSWELLING STRIPS SHALL BE INSTALLED ON ALL JOINT SURFACES WHICH WILL BE EXPOSED TO EARTH.
8. ALL WATERSTOPS SHALL BE INSTALLED SECURELY IN ACCORDANCE WITH THE SPECIFICATIONS. THE WATERSTOPS SHALL BE PLACED CONTINUOUSLY THROUGHOUT THE LENGTH OF THE CONSTRUCTION JOINT. LAPPING OF WATERSTOPS SHALL NOT BE PERMITTED. SPLICING SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
9. UNLESS INDICATED OTHERWISE, CONCRETE SURFACES LEADING TO DRAINS SHALL BE SLOPED A MINIMUM OF 1/8 INCH PER FOOT TOWARD THE DRAIN AND THE ADJACENT SURFACES WARPED AS REQUIRED TO SATISFY AN ADEQUATE DRAINAGE FLOW.

D. MATERIAL PROPERTIES

1. CONCRETE 28 DAY COMPRESSIVE STRENGTH (MINIMUM) UNLESS NOTED OTHERWISE

o) DRILLED SHAFTS: f'c=4500 PSI

b) PRECAST-PRESTRESSED PILES: f'c=6,500 PSI

c) FORMED CAST-IN-PLACE STRUCTURAL CONCRETE: f'c=5,000 PSI

d) PRECAST GIRDERS OR SEGMENTS OF GIRDERS: f'c=6,000 PSI

e) UNLESS NOTED OTHERWISE ON THE DRAWINGS, OR SPECIFIED, MINIMUM STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.

f) ALL EXPOSED CONCRETE EDGES AND CORNERS SHALL BE CHAMFERED WITH A 3/4 INCH, 45 DEGREE CHAMFER UNLESS NOTED OTHERWISE.
2. REINFORCING STEEL SHALL CONFORM TO THE SPECIFICATIONS OF ASTM A 706 GRADE 60.
3. PRESTRESSING STEEL

o) STRAND: ASTM A416/AASHTO M203, GRADE 270, LOW RELAXATION

FRICTION COEFFICIENT: 0.25

WOBBLE COEFFICIENT: 0.0002 PER FT

ANCHOR SET: 0.375"

APPARENT MODULUS: 28,500 KSI

MINIMUM JACKING STRESS: 216 KSI (80% ULTIMATE)

MAXIMUM ANCHORING STRESS: 189 KSI (70% ULTIMATE)

MAXIMUM STRESS AFTER ANCHOR SET: 202 KSI (75% ULTIMATE)

STRAND DIAMETER: 0.6" (AREA=0.216 SQ IN)

- b) POST TENSIONING BARS: ASTM A722/AASHTO M275, GRADE 150, TYPE II

ANCHOR SET: 0.0625"

APPARENT MODULUS: 30,000 KSI

MAXIMUM JACKING STRESS: 113 KSI

MAXIMUM ANCHORING STRESS: 105 KSI

MAXIMUM STRESS AFTER LOSSES: 96 KSI

4. STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A6 WITH A YIELD STRENGTH OF FY = 50 KSI UNLESS NOTED OTHERWISE. THE FOLLOWING MATERIAL PROPERTIES SHALL APPLY:

- a) WIDE FLANGE SHAPES: ASTM A992
- b) M-SHAPES, S-SHAPES, HP SHAPES: ASTM A572
- c) ANGLES, CHANNELS: ASTM A572
- d) RECTANGULAR AND SQUARE HSS: ASTM A500 GR B (46 KSI)
- e) ROUND HSS: ASTM A500 GR B (42 KSI)
- f) STEEL PIPE: ASTM A53 GR B (35 KSI)
- g) PLATES, BARS: ASTM A36 (36 KSI)
- h) BOLTS: ASTM A325
- i) NUTS: ASTM A563
- j) WASHERS: ASTM F436

5. STEEL FABRICATIONS

- a) WELDING OF BUILT UP MEMBERS AND STEEL FABRICATIONS SHALL COMPLY WITH AASHTO/AWS D 1.5
- b) WELDING OF HSS SECTIONS AND PIPES SHALL COMPLY WITH AWS D 1.1
- c) MISCELLANEOUS STEEL ITEMS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION UNLESS COMPLETELY EMBEDDED IN CONCRETE AND UNLESS NOTED OTHERWISE.

6. FASTENERS

- a) ALL HIGH STRENGTH BOLTS NUTS AND WASHERS SHALL BE ZINC COATED
- b) ALL BOLTED CONNECTIONS SHALL COMPLY WITH RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC) "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".
- c) ALL BOLTS ARE ASTM A325 HIGH STRENGTH SLIP CRITICAL WITH THREADS EXCLUDED FROM THE SHEAR PLANE

7. CONCRETE COVER

UNLESS OTHERWISE NOTED, MINIMUM CONCRETE COVER SHALL BE:

- a) DRILLED SHAFTS: 6"
- b) PIERS, COLUMNS, WALLS, BENT CAPS: 2"
- c) FOOTINGS AND CONCRETE CAST AGAINST EARTH: 3"

- d) SUPERSTRUCTURE (CAST-IN-PLACE, PRECAST) TOP OF DECK: 2.5"
- e) SUPERSTRUCTURE (CAST-IN-PLACE, PRECAST) EXTERIOR SURFACES: 2"
- f) SUPERSTRUCTURE (CAST-IN-PLACE, PRECAST) INTERIOR SURFACES: 1.5"
- g) CONCRETE SURFACES NOT EXPOSED TO WEATHER, SOIL OR WATER: PRINCIPAL REINFORCEMENT: 2" STIRRUPS, TIES AND SPIRALS: 1.5"

8. ALLOWABLE STRESSES IN POST-TENSIONED CONCRETE

- a) SUPERSTRUCTURE CONCRETE STRESSES AT THE SERVICE LIMIT STATE

MAXIMUM COMPRESSION: 0.45 f'c (POST-TENSIONING AND PERMANENT LOADS)

0.60 f'c (PERMANENT LOADS AND TRANSIENT LOADS)
- b) LONGITUDINAL TENSION

NO TENSION STRESSES ARE ALLOWED IN PRECOMPRESSED TENSILE ZONE AFTER ALL LOSSES HAVE OCCURRED.
- c) PRINCIPAL TENSION STRESS: 0.1106 SQUARE ROOT f'c (KSI)
- d) THE SUPERSTRUCTURE SHALL BE DESIGNED FOR APPLICABLE SERVICE, STRENGTH AND EXTREME LIMIT STATES AS DEFINED BY THE LOAD GROUPS IN THE DESIGN MANUAL.

E. SEISMIC LOADING AND DESIGN

THERE ARE TWO LEVELS OF DESIGN EARTHQUAKES: THE MAXIMUM CONSIDERED EARTHQUAKE (MCE) AND THE OPERATING BASIS EARTHQUAKE (OBE) DEFINED AS:

1. MAXIMUM CONSIDERED EARTHQUAKE (MCE): GROUND MOTIONS CORRESPONDING TO GREATER OF (1) A PROBABILISTIC SPECTRUM BASED UPON A 10% PROBABILITY OF EXCEEDANCE IN 100 YEARS (i.e., A RETURN PERIOD OF 950 YEARS) AND (2) A DETERMINISTIC SPECTRUM BASED UPON THE LARGEST MEDIAN RESPONSE RESULTING FROM THE MAXIMUM RUPTURE (CORRESPONDING TO M<sub>w</sub>) OF ANY FAULT IN THE VICINITY OF THE STRUCTURE.
2. OPERATING BASIS EARTHQUAKE (OBE): GROUND MOTIONS CORRESPONDING TO A PROBABILISTIC SPECTRUM BASED UPON AN 86% PROBABILITY OF EXCEEDANCE IN 100 YEARS (i.e., A RETURN PERIOD OF 50 YEARS).

ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

PROPOSED  
PRELIMINARY  
DESIGN

NOT FOR  
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
TRACK STRUCTURES  
GENERAL NOTES  
SHEET 1 OF 2

CONTRACT NO.
DRAWING NO. ST-B0011
SCALE NO SCALE
SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16

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GENERAL NOTES  
LOAD AND RESISTANCE FACTOR DESIGN

- DESIGN:

HIGH SPEED RAIL DESIGN CRITERIA, AASHTO LRFD  
BRIDGE DESIGN SPECIFICATIONS 4TH EDITION AND  
CALTRANS AMENDMENTS, ACI 350 (WATER  
CONVEYING STRUCTURES)
- STANDARD  
SPECIFICATIONS:

HIGH SPEED RAIL SPECIFICATIONS,  
CALTRANS STANDARD SPECIFICATIONS DATED MAY  
2006
- SEISMIC  
DESIGN:

HIGH SPEED RAIL DESIGN CRITERIA,  
CALTRANS SEISMIC DESIGN CRITERIA (SDC)  
VERSION 1.6, NOVEMBER 2010
- LIVE LOADING:

COOPER E50 - HST ROUTE  
COOPER E80 - UPRR ROUTE
- WIND LOAD:

100 MPH WIND VELOCITY
- REINFORCED  
CONCRETE:

fy = 60 KSI

f'c = SEE CONCRETE STRENGTH AND TYPE LIMITS
- PILES:

Drilled shafts

f'c = 4.5 KSI

Precast-prestressed

f'c = 6.5 KSI
- PRESTRESSED  
CONCRETE:

LOW RELAXATION STRANDS

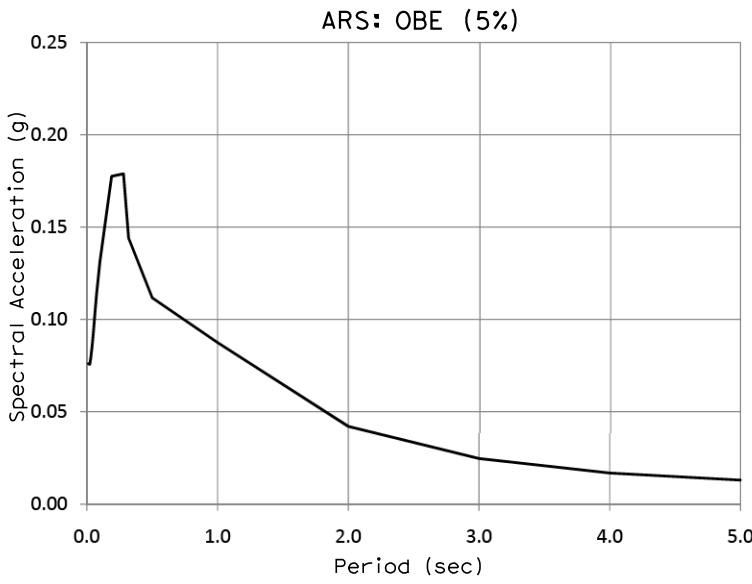
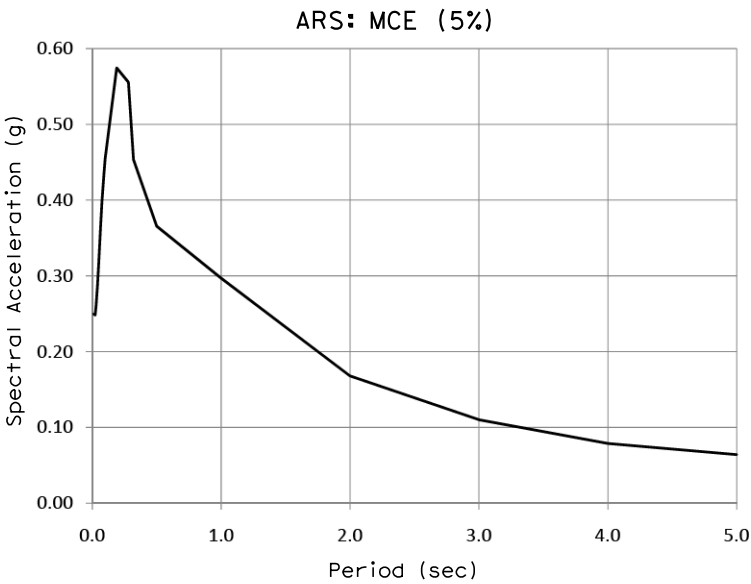
fpy = 243 KSI

fpu = 270 KSI

f'ci = 5 KSI AT TIME OF RELEASE

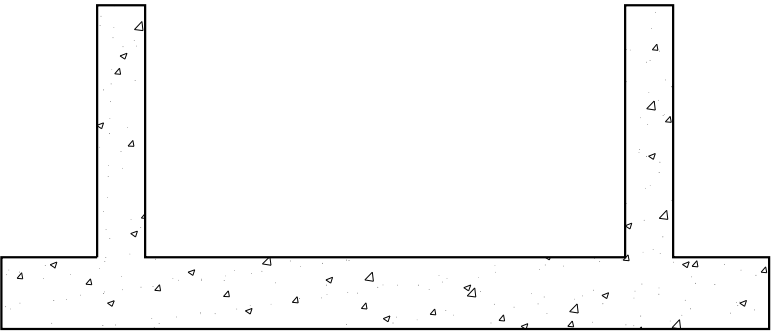
f'c = 7 KSI AT 28 DAYS

THE ARS CURVES SHOWN BELOW ARE FOR PRELIMIARNRY DESIGN. REVISED ARS CURVES WILL BE PROVIDED FOR DETAILED DESIGN.



GENERAL  
STRUCTURAL NOTES

1. PILE/SHAFT LENGTHS TO BE DETERMINED.
2. EMBEDDED ITEMS REQUIRED FOR UTILITY  
INSTALLATIONS ARE NOT SHOWN ON THE STRUCTURAL  
DRAWINGS. CONTRACTOR SHALL REFER TO THE  
UTILITY DRAWINGS FOR THE LOCATIONS AND DETAILS  
OF THESE ITEMS.
3. MSE WALL REINFORCEMENT AND PANEL TO BE  
DETERMINED.
4. BRIDGE ARTICULATION IS DENOTED BY:  
'M' FOR MOVING SUPPORTS (SLIDING BEARINGS)  
AND  
'F' FOR FIXED SUPPORTS (FIXED BEARINGS OR  
CAST-IN COLUMNS).  
WHERE A COLUMN SUPPORTS TWO BEARING SETS, THE  
ARTICULATION OF EACH SET IS INDICATED  
SEPARATELY.
5. FOR LAUNCHED TRUSS STRUCTURES,  
ADDITIONAL BRACING MAY BE REQUIRED IF DECK SLAB  
IS NOT TO BE CONSTRUCTED BEFORE LAUNCH.



STRUCTURAL CONCRETE, TRENCH STRUCTURE  
f'c = 4 ksi at 28 days

CONCRETE STRENGTH AND TYPE LIMITS  
NO SCALE

ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY Q. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

PROPOSED  
PRELIMINARY  
DESIGN  
  
NOT FOR  
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
TRACK STRUCTURES  
GENERAL NOTES  
SHEET 2 OF 2

CONTRACT NO.
DRAWING NO. ST-B0012
SCALE NO SCALE
SHEET NO.





DESIGNED BY	A. ARMSTRONG
DRAWN BY	F. PALERMO
CHECKED BY	Q. LIU
IN CHARGE	R. COFFIN
DATE	04/27/12

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

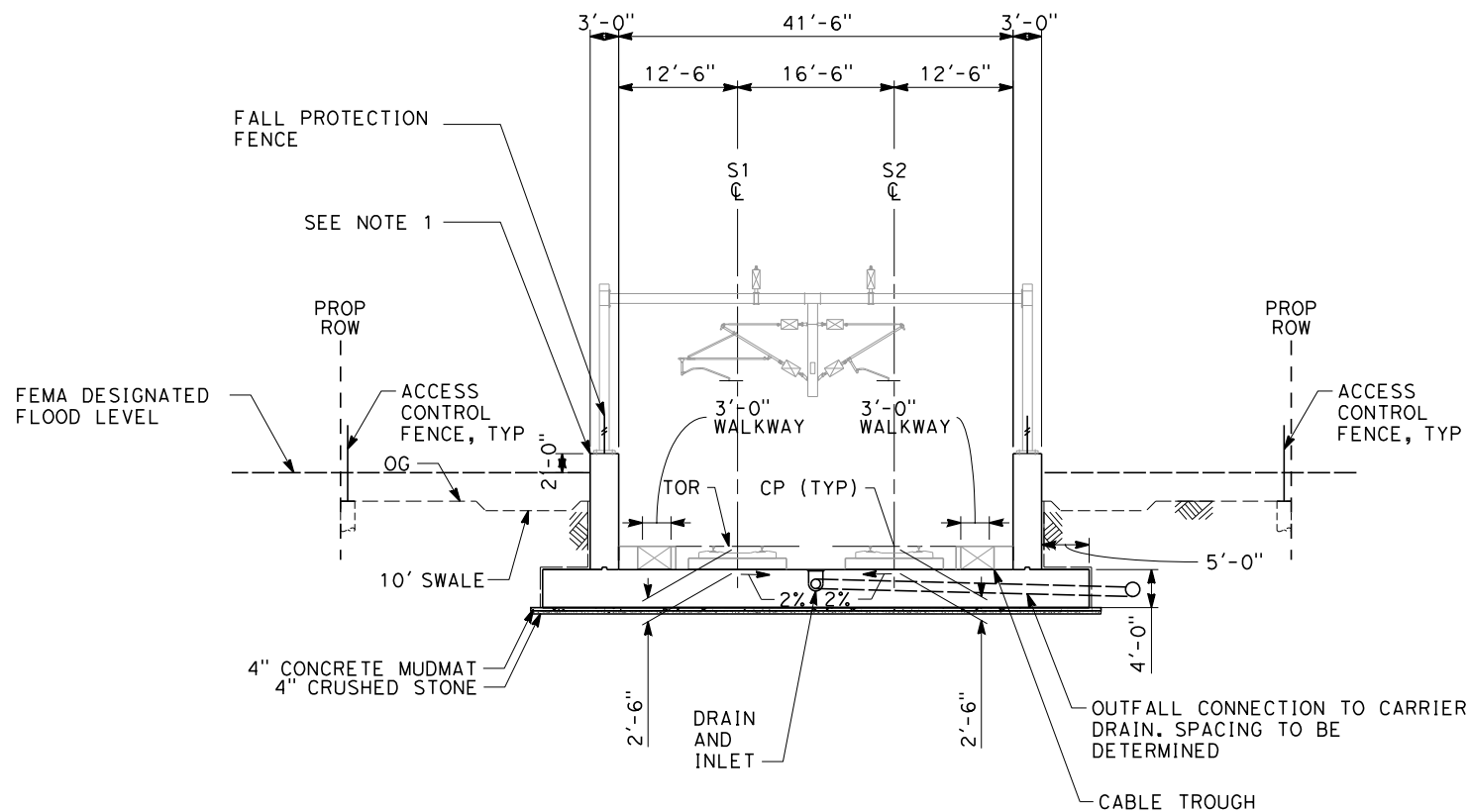
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
TRACK STRUCTURES  
KEY MAP

CONTRACT NO.
DRAWING NO. ST-B0014
SCALE AS SHOWN
SHEET NO.

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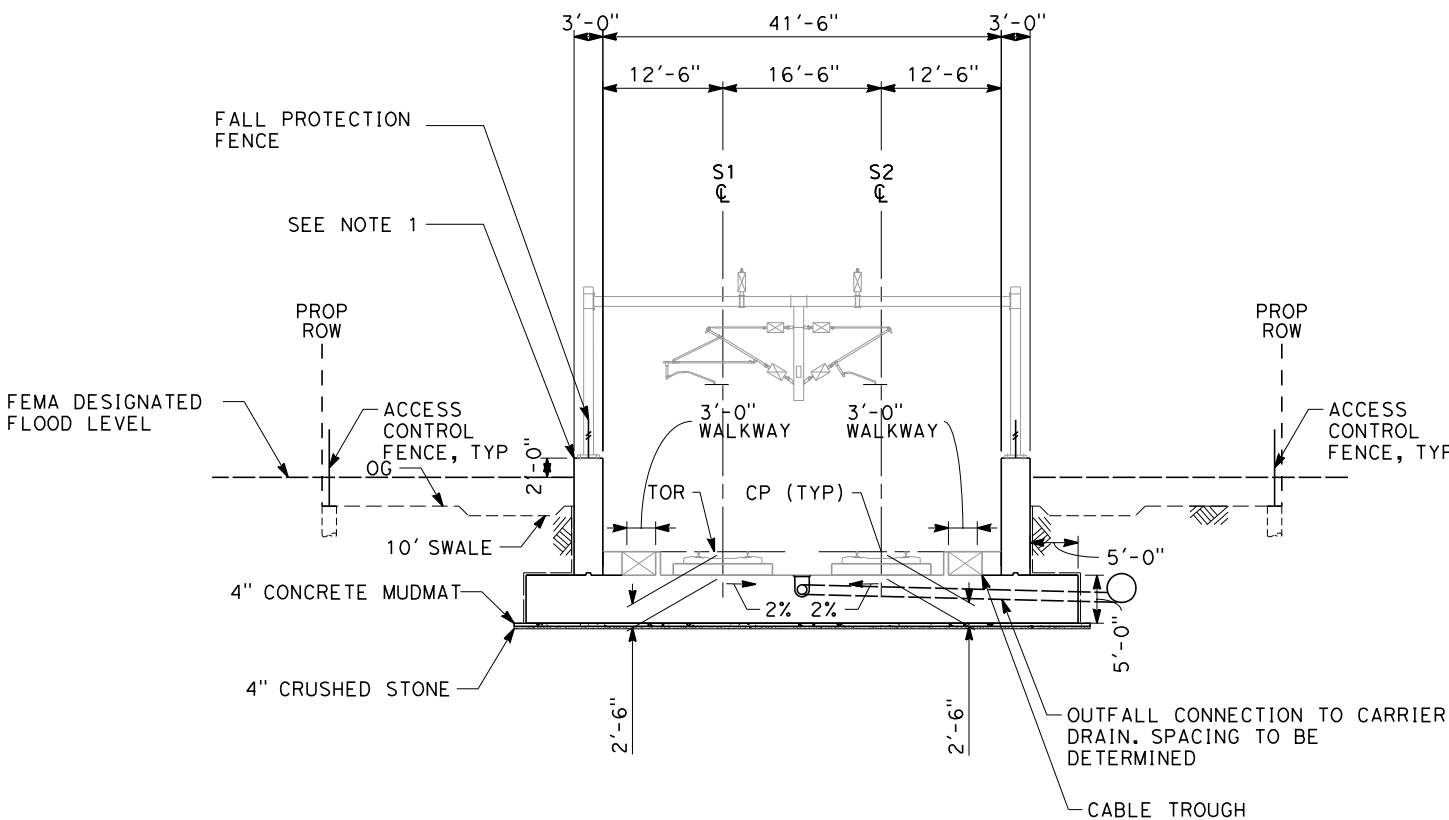
NOTES:

1. TOP OF WALL LEVEL IS 3 FEET ABOVE GRADE EXCEPT IN THE FEMA DESIGNATED FLOOD PLAIN WHERE THE TOP OF WALL LEVEL SHALL BE THE GREATER OF 5 FEET ABOVE GRADE OR 2 FEET ABOVE THE MAXIMUM FEMA FLOOD DEPTH.



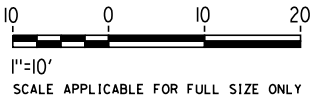
**SECTION A**  
SCALE: 1" = 10'

STA 11069+40 THROUGH 11119+50  
STA 11122+40 THROUGH 11140+00  
DEPTH TO TOP OF RAIL BELOW GROUND LEVEL  
MIN = -2'-0"  
MAX = 5'-5"



**SECTION B**  
SCALE: 1" = 10'

STA 11119+50 THROUGH 11122+40  
DEPTH TO TOP OF RAIL BELOW GROUND LEVEL  
MIN = 5'-5"  
MAX = 5'-7"



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

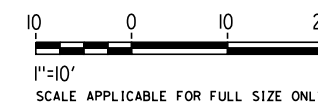
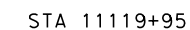
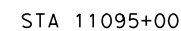


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
TRACK STRUCTURES  
JENSEN TRENCH  
TYPICAL SECTIONS

CONTRACT NO.
DRAWING NO. ST-Y3005
SCALE AS SHOWN
SHEET NO.



1. TOP OF WALL LEVEL IS  
3 FEET ABOVE GRADE EXCEPT  
IN THE FEMA DESIGNATED  
FLOOD PLAIN WHERE THE TOP  
OF WALL LEVEL SHALL BE  
THE GREATER OF  
5 FEET ABOVE GRADE  
OR  
2 FEET ABOVE THE  
MAXIMUM FEMA FLOOD  
DEPTH.



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
TRACK STRUCTURES  
JENSEN TRENCH  
TYPICAL SECTIONS

CONTRACT NO.
DRAWING NO. ST-Y3006
SCALE AS SHOWN
SHEET NO.

REV	DATE	BY	CHK	APP	DESCRIPTION

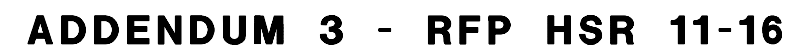
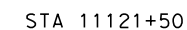
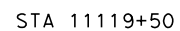
DESIGNED BY	A. ARMSTRONG
DRAWN BY	F. PALERMO
CHECKED BY	Q. LIU
IN CHARGE	R. COFFIN
DATE	06/06/12




**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



1. TOP OF WALL LEVEL IS  
3 FEET ABOVE GRADE EXCEPT  
IN THE FEMA DESIGNATED  
FLOOD PLAIN WHERE THE TOP  
OF WALL LEVEL SHALL BE  
THE GREATER OF  
5 FEET ABOVE GRADE  
OR  
2 FEET ABOVE THE  
MAXIMUM FEMA FLOOD  
DEPTH.

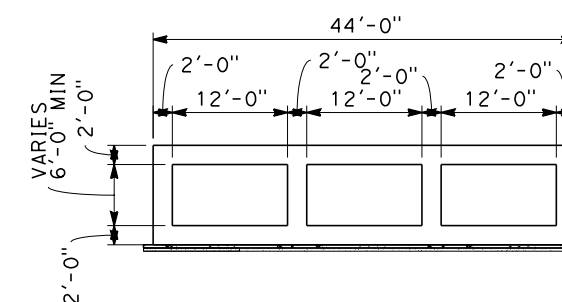


						DESIGNED BY A. ARMSTRONG	<b>PROPOSED PRELIMINARY DESIGN</b>  <b>NOT FOR CONSTRUCTION</b>	 		<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b> PACKAGE 1C TRACK STRUCTURES JENSEN TRENCH TYPICAL SECTIONS	CONTRACT NO.
						DRAWN BY F. PALERMO					DRAWING NO. ST-Y3007
						CHECKED BY Q. LIU					SCALE AS SHOWN
						IN CHARGE R. COFFIN					SHEET NO.
						DATE 06/06/12					
REV	DATE	BY	CHK	APP	DESCRIPTION						

1. TOP OF WALL LEVEL IS  
3 FEET ABOVE GRADE EXCEPT  
IN THE FEMA DESIGNATED  
FLOOD PLAIN WHERE THE TOP  
OF WALL LEVEL SHALL BE  
THE GREATER OF  
5 FEET ABOVE GRADE  
OR  
2 FEET ABOVE THE  
MAXIMUM FEMA FLOOD  
DEPTH.

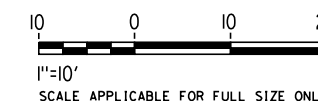


STA 11103+20






**SECTION H**  
SCALE: 1" = 10'

STA 11121+50

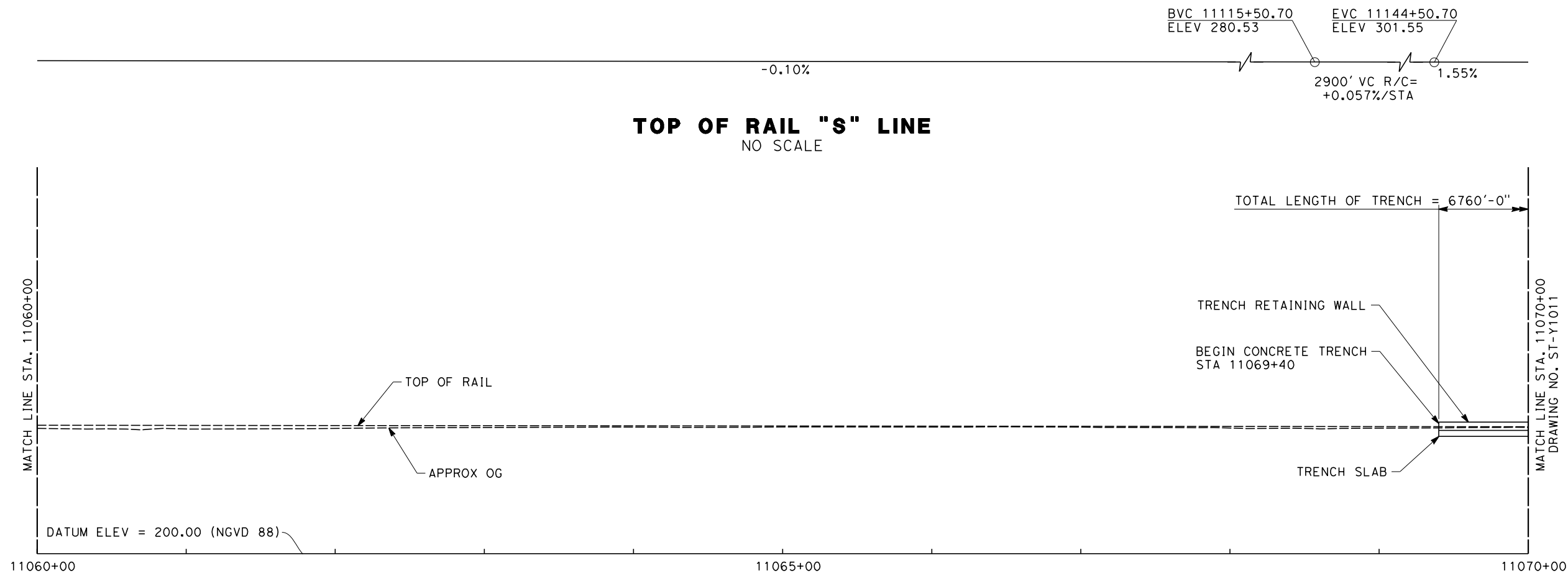


## ADDENDUM 3 - RFP HSR 11-16

						DESIGNED BY A. ARMSTRONG	<b>PROPOSED PRELIMINARY DESIGN</b>  <b>NOT FOR CONSTRUCTION</b>	 		<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b> PACKAGE 1C TRACK STRUCTURES JENSEN TRENCH TYPICAL SECTIONS	CONTRACT NO.
						DRAWN BY F. PALERMO					DRAWING NO. ST-Y3008
						CHECKED BY Q. LIU					SCALE AS SHOWN
						IN CHARGE R. COFFIN					SHEET NO.
						DATE 06/06/12					
REV	DATE	BY	CHK	APP	DESCRIPTION						

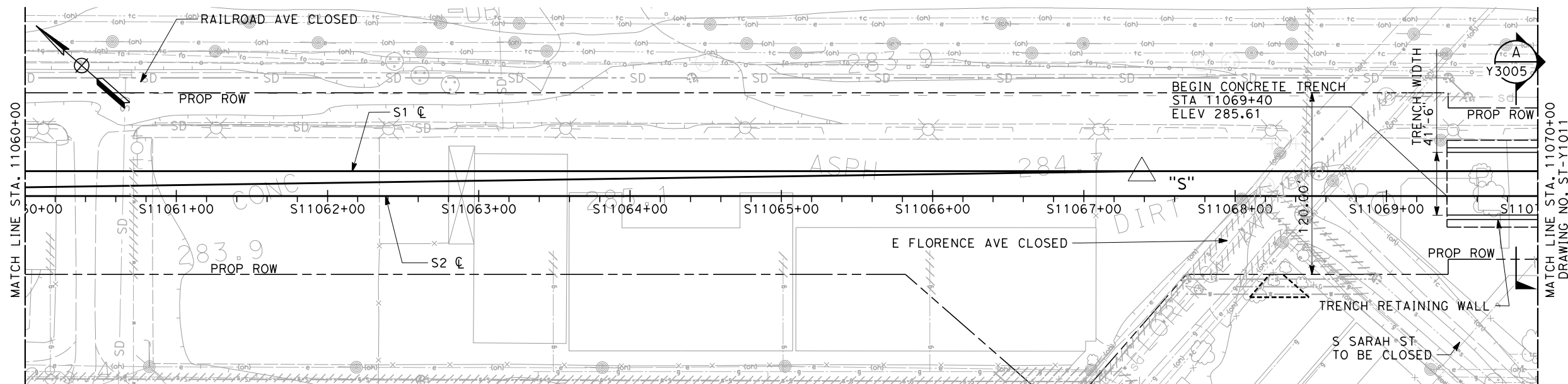


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- NOTES:**
1. GRADE ELEVATIONS SHOWN ARE EQUAL TO TOP OF RAIL.
  2. ALL PIERS ARE NORMAL TO THE STATION LINE UNLESS OTHERWISE SHOWN.
  3. REFER TO TRACK ALIGNMENT DATA TABLE FOR CURVE AND TANGENT INFORMATION.

**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

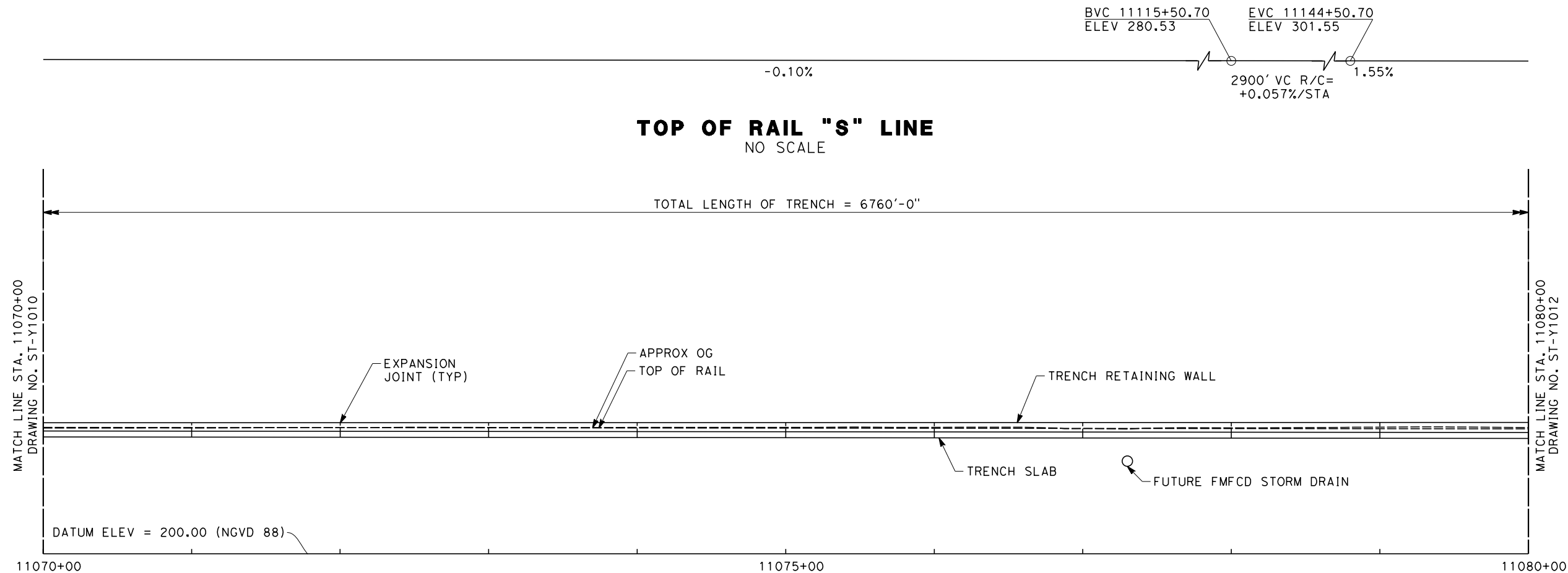


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

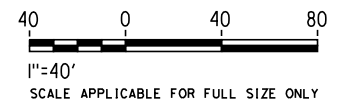
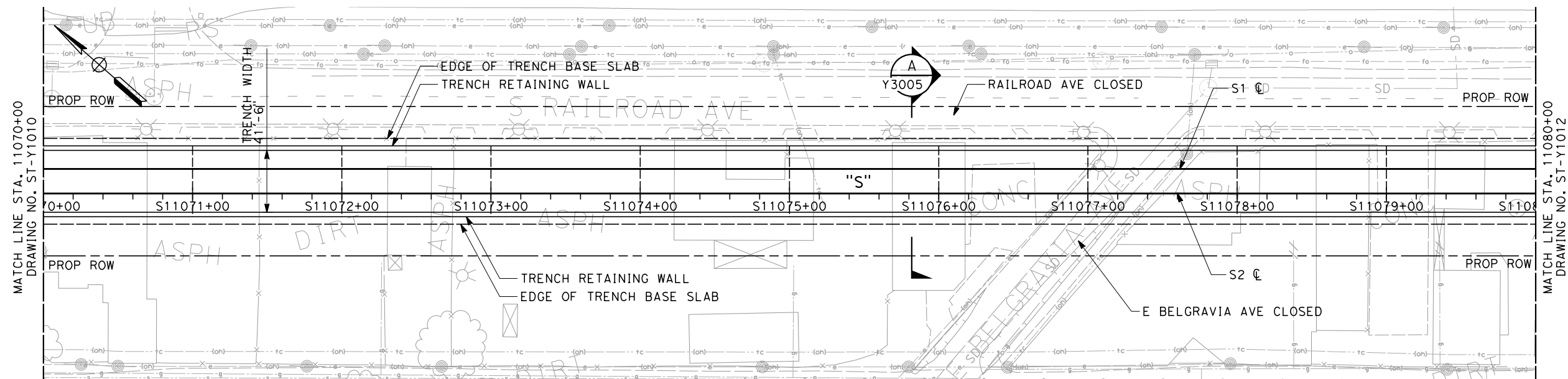
PACKAGE 1C  
TRACK STRUCTURES  
JENSEN TRENCH  
PLAN AND ELEVATION

CONTRACT NO.
DRAWING NO. ST-Y1010
SCALE AS SHOWN
SHEET NO.

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**NOTES:**  
1. FOR NOTES SEE DRAWING NO. ST-Y1010



**PLAN**  
SCALE 1" = 40'

**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

<b>PROPOSED PRELIMINARY DESIGN</b>
<b>NOT FOR CONSTRUCTION</b>

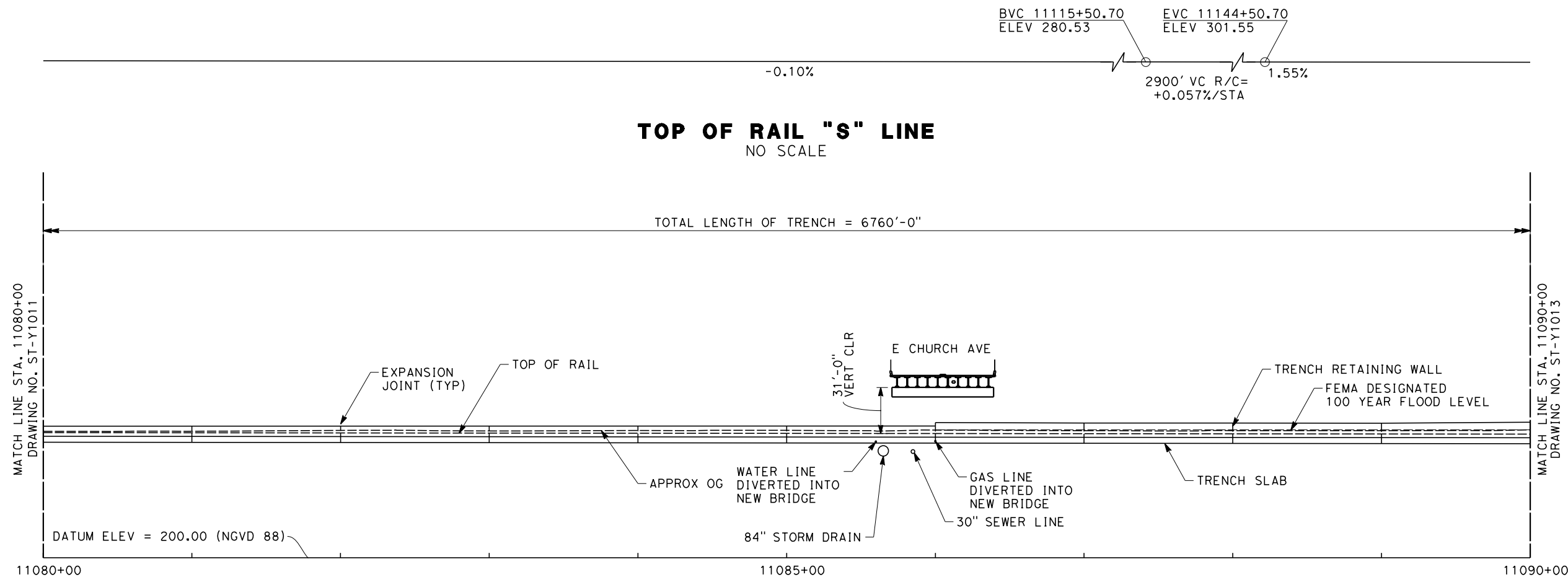


<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b>
PACKAGE 1C TRACK STRUCTURES JENSEN TRENCH PLAN AND ELEVATION

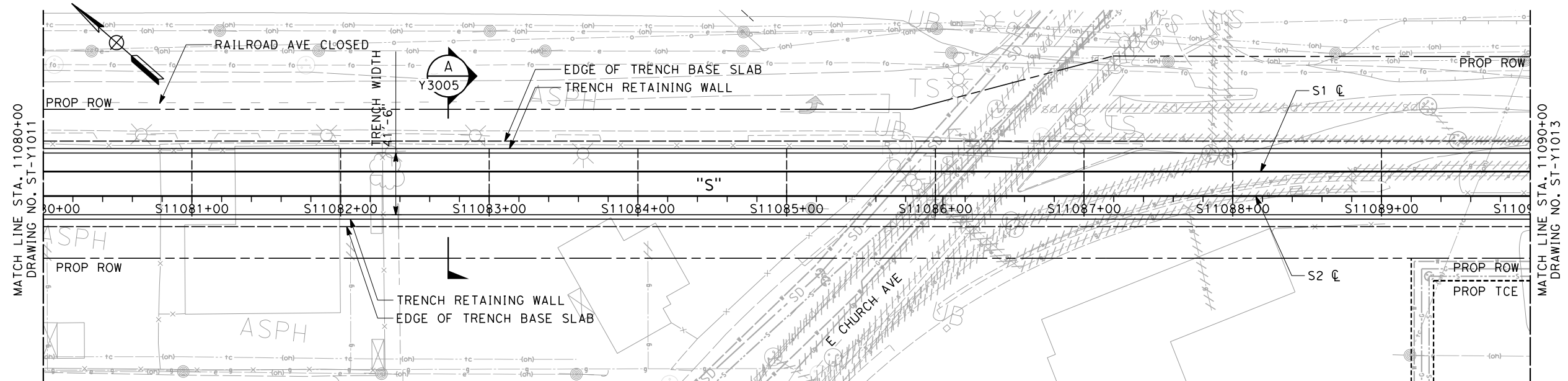
CONTRACT NO.
DRAWING NO. ST-Y1011
SCALE AS SHOWN
SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16

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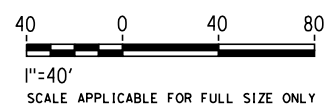


**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

**NOTES:**  
1. FOR NOTES SEE DRAWING NO. ST-Y1010



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. ARMSTRONG

DRAWN BY  
F. PALERMO

CHECKED BY  
O. LIU

IN CHARGE  
R. COFFIN

DATE  
06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
TRACK STRUCTURES  
JENSEN TRENCH  
PLAN AND ELEVATION

CONTRACT NO.

DRAWING NO.  
ST-Y1012

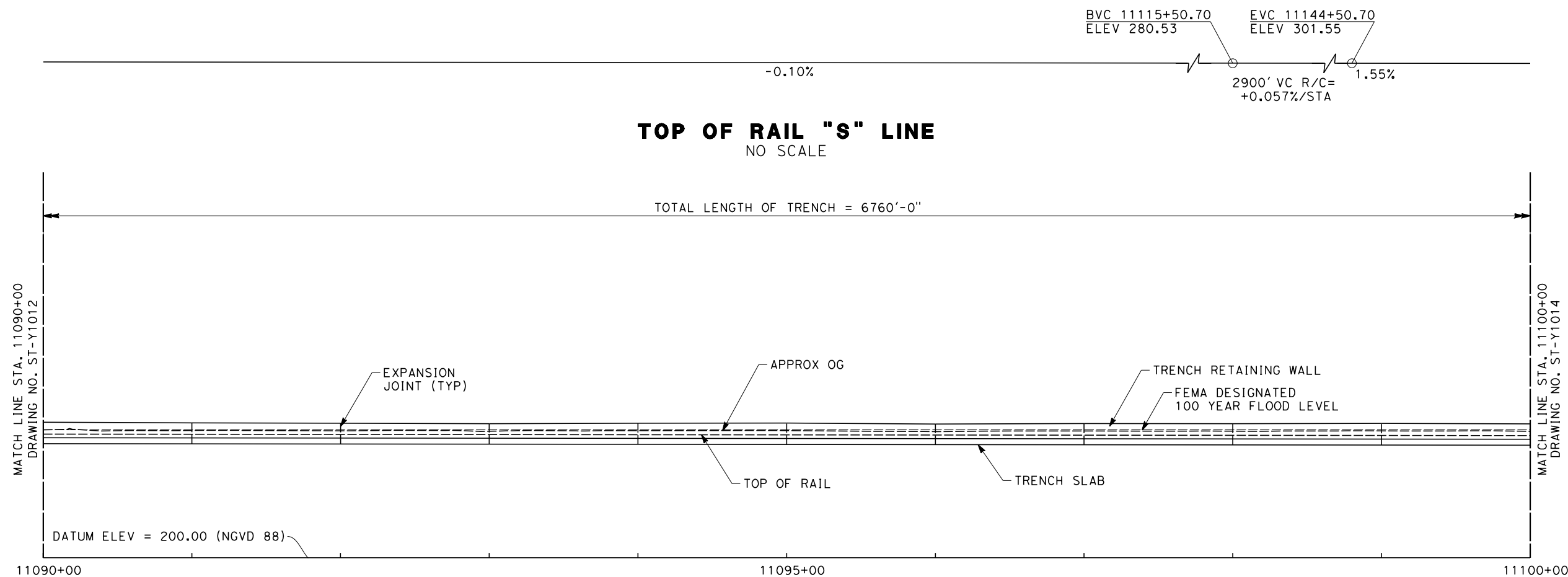
SCALE  
AS SHOWN

SHEET NO.

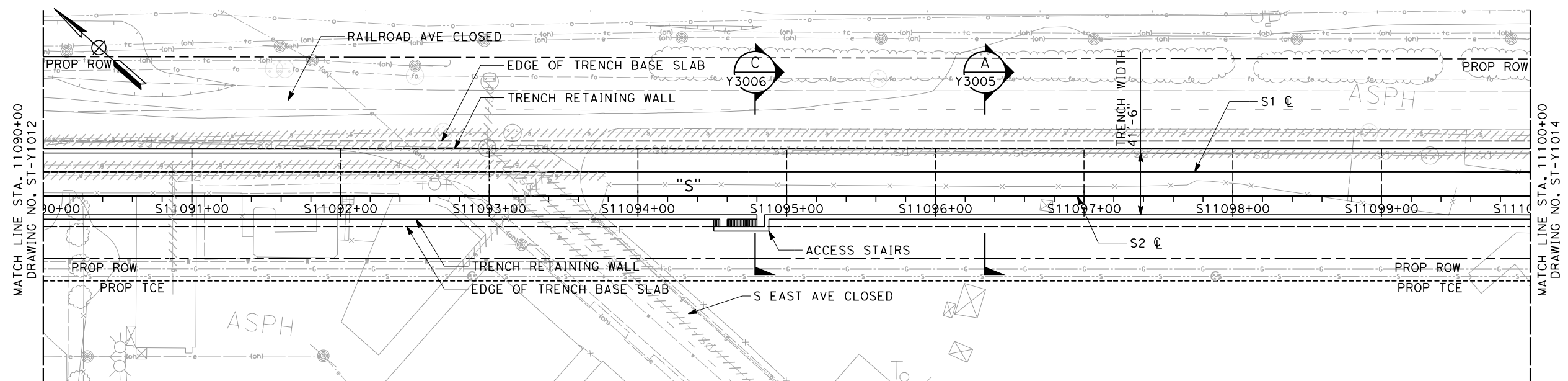
06/29/2012 ADDENDUM 3 - RFP HSR 11-16



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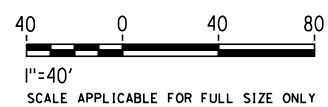


**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

**NOTES:**  
1. FOR NOTES SEE DRAWING NO. ST-Y1010



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. ARMSTRONG

DRAWN BY  
F. PALERMO

CHECKED BY  
O. LIU

IN CHARGE  
R. COFFIN

DATE  
06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
TRACK STRUCTURES  
JENSEN TRENCH  
PLAN AND ELEVATION

CONTRACT NO.

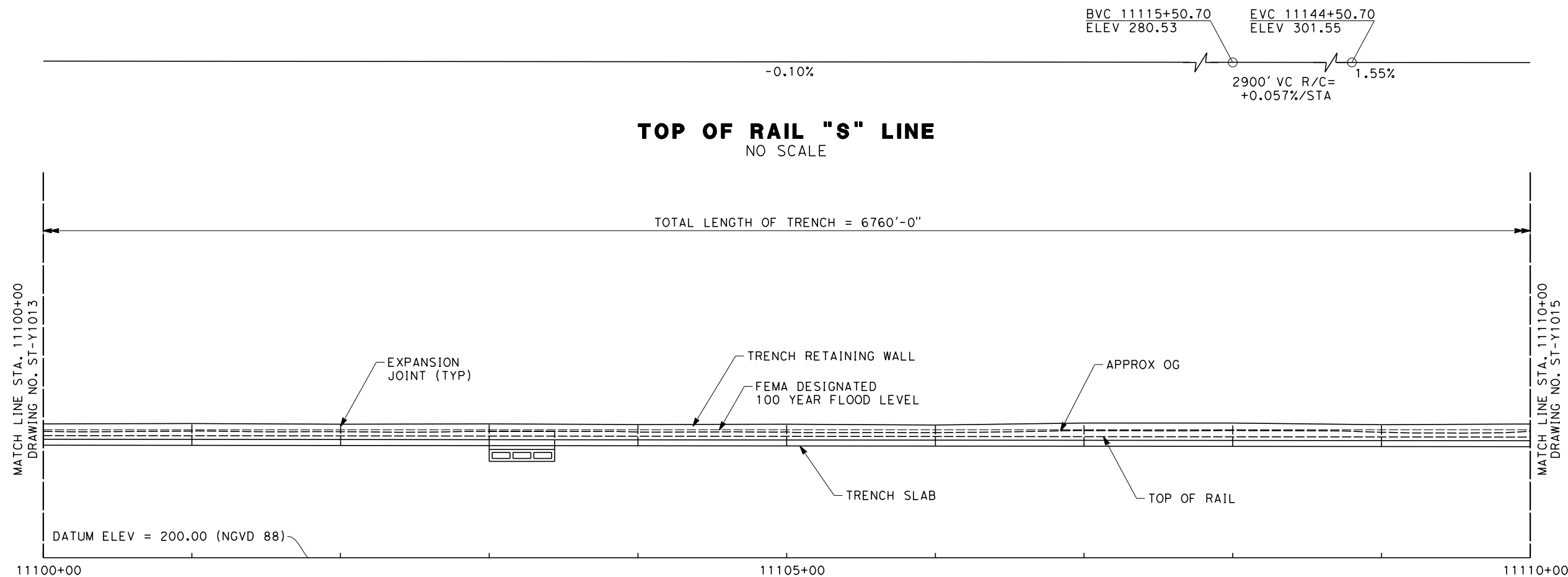
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SCALE  
AS SHOWN

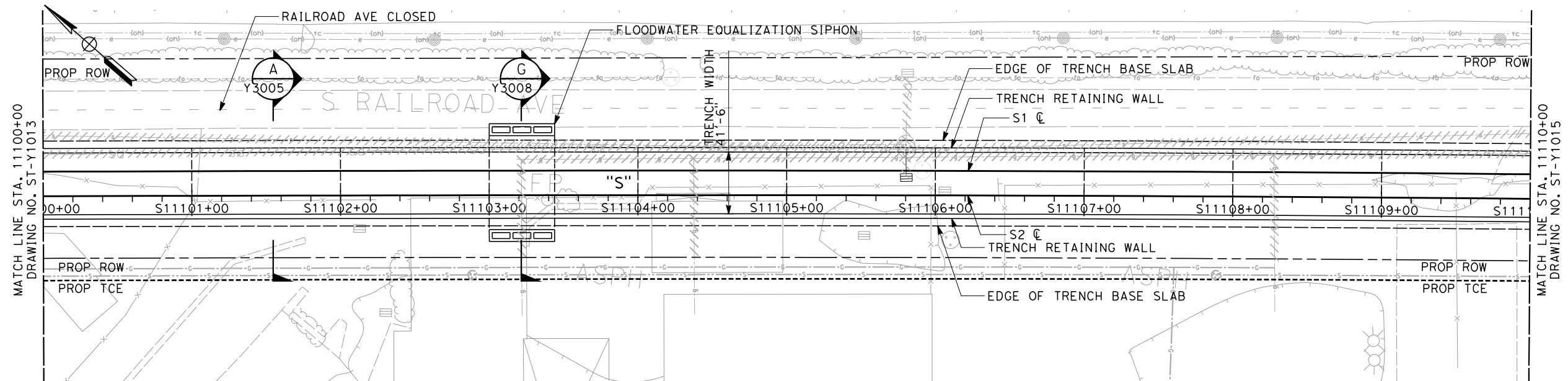
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06/29/2012 ADDENDUM 3 - RFP HSR 11-16

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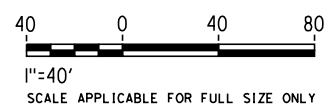


**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

**NOTES:**  
1. FOR NOTES SEE DRAWING NO. ST-Y1010



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. ARMSTRONG  
DRAWN BY  
F. PALERMO  
CHECKED BY  
O. LIU  
IN CHARGE  
R. COFFIN  
DATE  
06/06/12

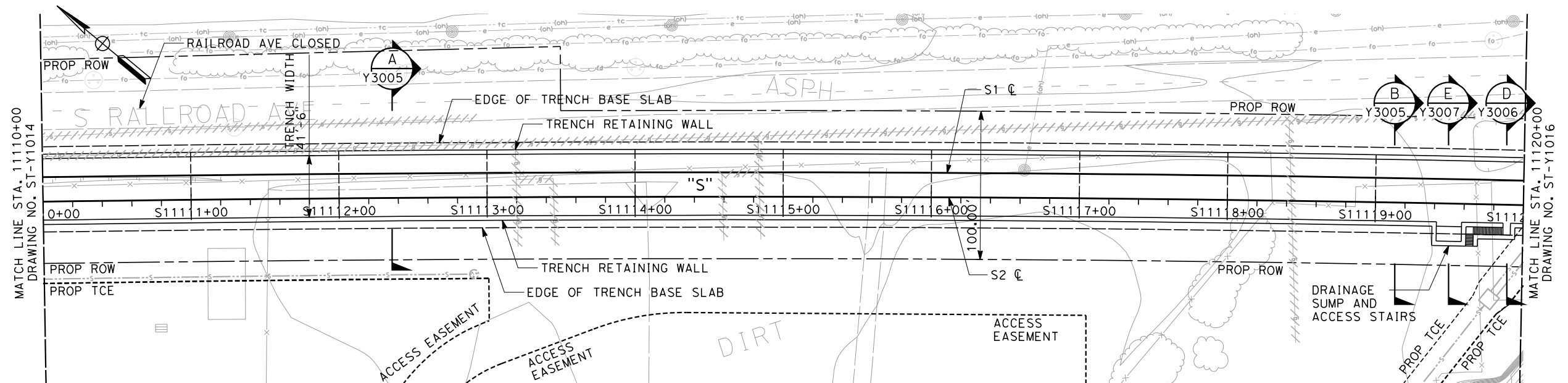
**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
TRACK STRUCTURES  
JENSEN TRENCH  
PLAN AND ELEVATION

CONTRACT NO.  
DRAWING NO.  
ST-Y1014  
SCALE  
AS SHOWN  
SHEET NO.



40 0 40 80  
1"=40'  
SCALE APPLICABLE FOR FULL SIZE ONLY

CONTRACT NO.
DRAWING NO. ST-Y1015
SCALE AS SHOWN
SHEET NO.

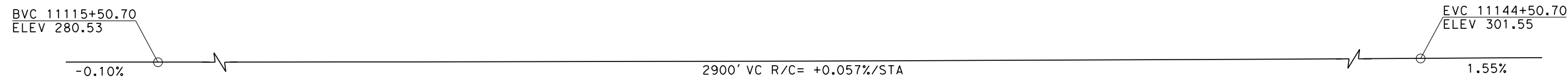
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**PROPOSED  
PRELIMINARY  
DESIGN**

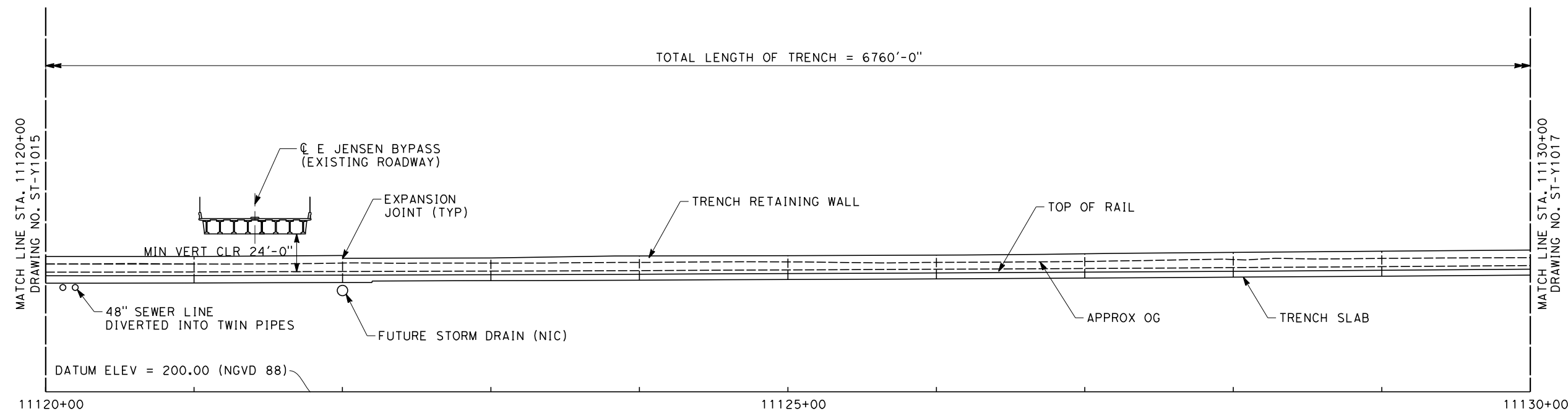
**NOT FOR  
CONSTRUCTION**



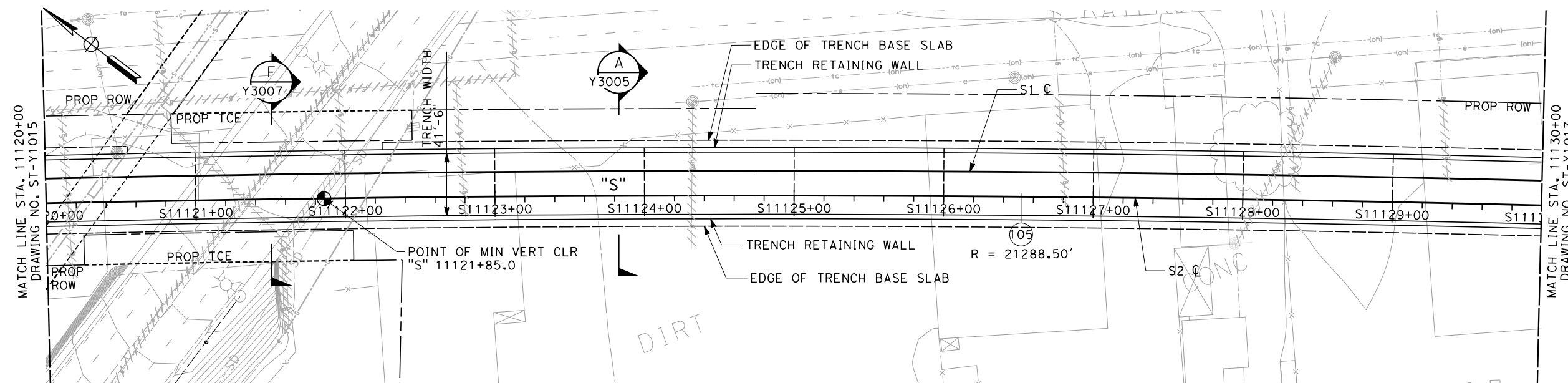
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**TOP OF RAIL "S" LINE**  
NO SCALE



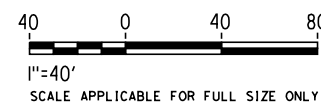
**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

**NOTES:**

1. FOR NOTES SEE DRAWING NO. ST-Y1010



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

<b>PROPOSED PRELIMINARY DESIGN</b>
<b>NOT FOR CONSTRUCTION</b>

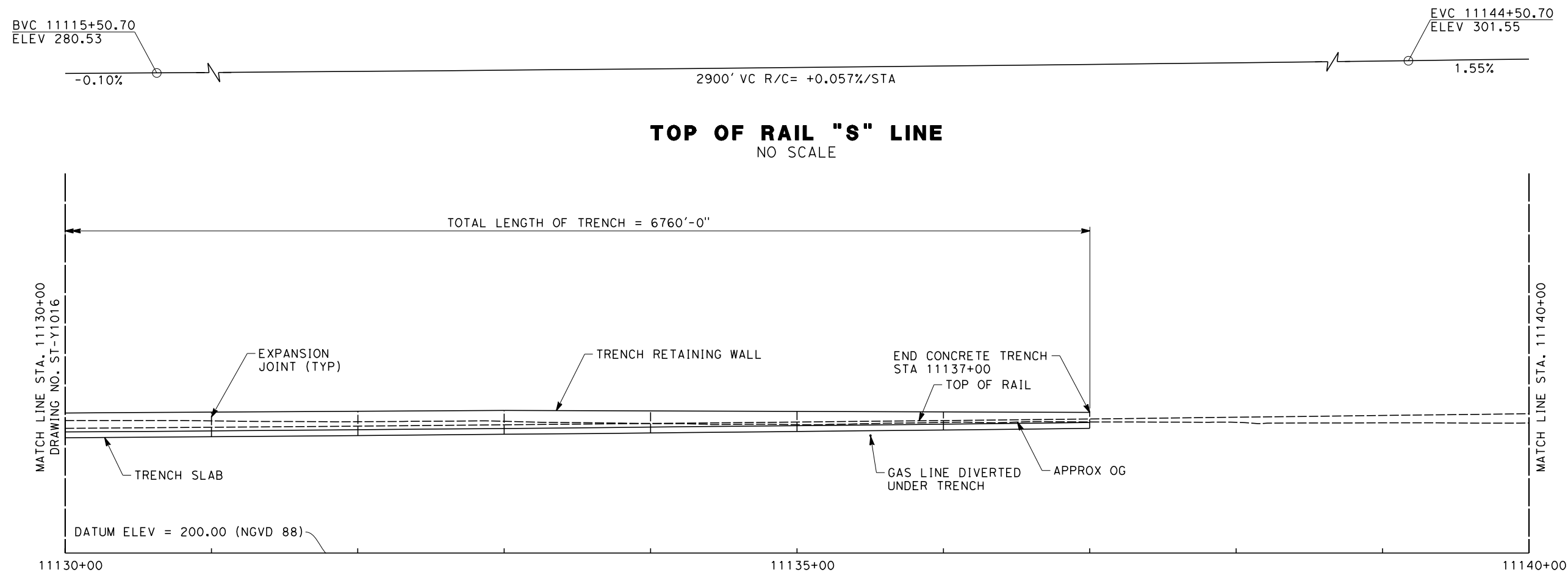


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PACKAGE 1C TRACK STRUCTURES JENSEN TRENCH PLAN AND ELEVATION

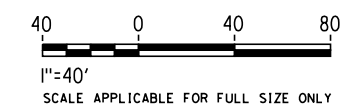
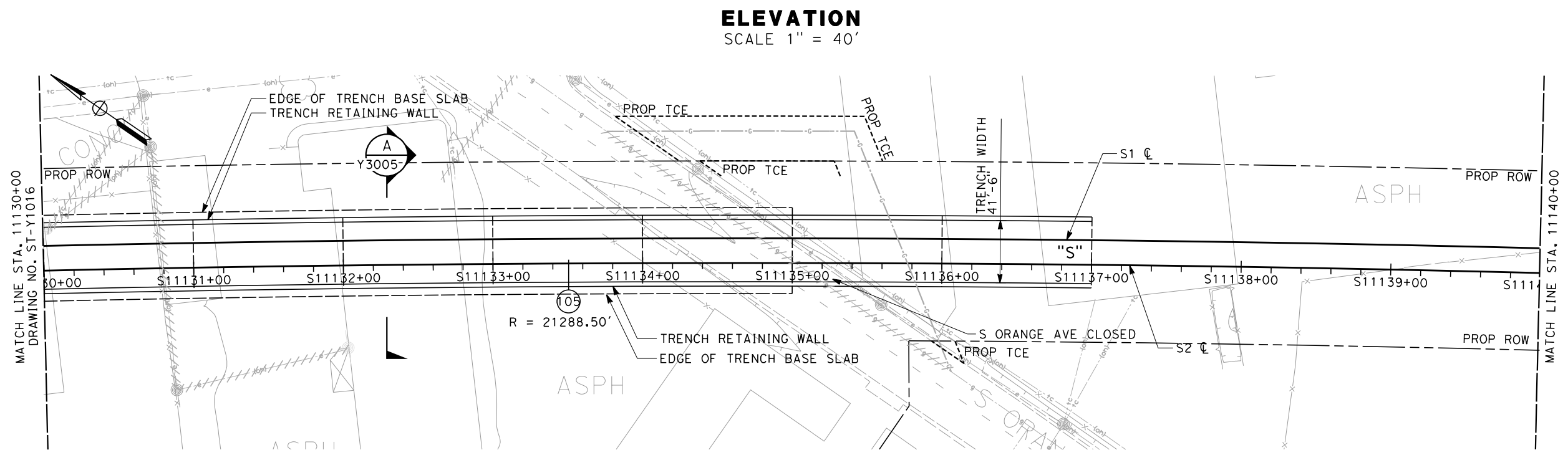
CONTRACT NO.
DRAWING NO. ST-Y1016
SCALE AS SHOWN
SHEET NO.



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**NOTES:**  
1. FOR NOTES SEE DRAWING NO. ST-Y1010



### ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY <b>A. ARMSTRONG</b>
DRAWN BY <b>F. PALERMO</b>
CHECKED BY <b>O. LIU</b>
IN CHARGE <b>R. COFFIN</b>
DATE <b>06/06/12</b>

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



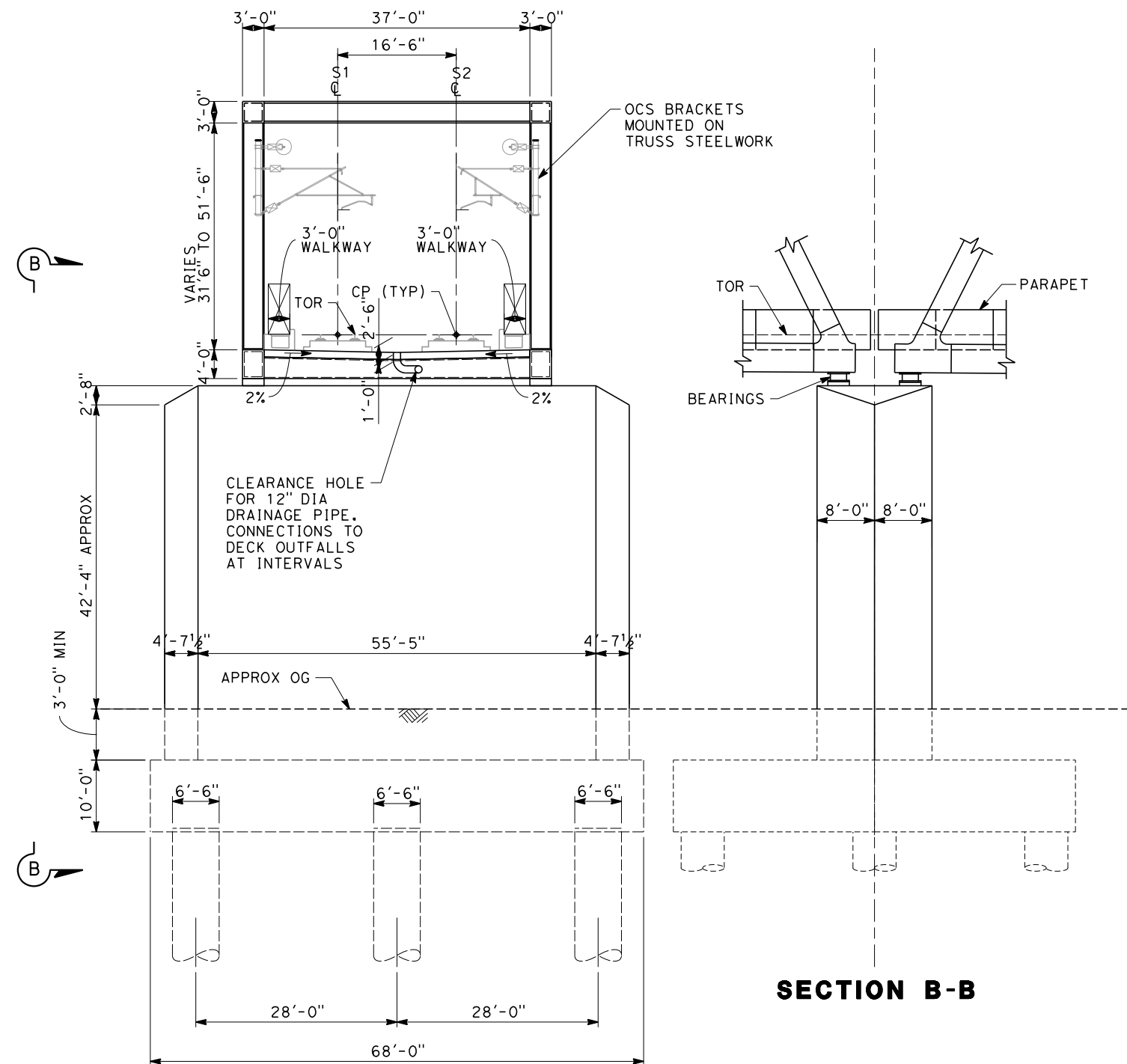
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
TRACK STRUCTURES  
JENSEN TRENCH  
PLAN AND ELEVATION

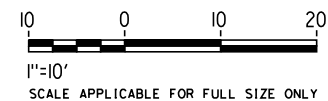
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SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16



"S" 11155+40 THROUGH 11191+50  
"S" 11200+05 THROUGH 11216+00



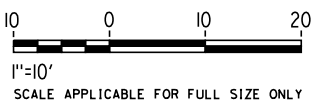
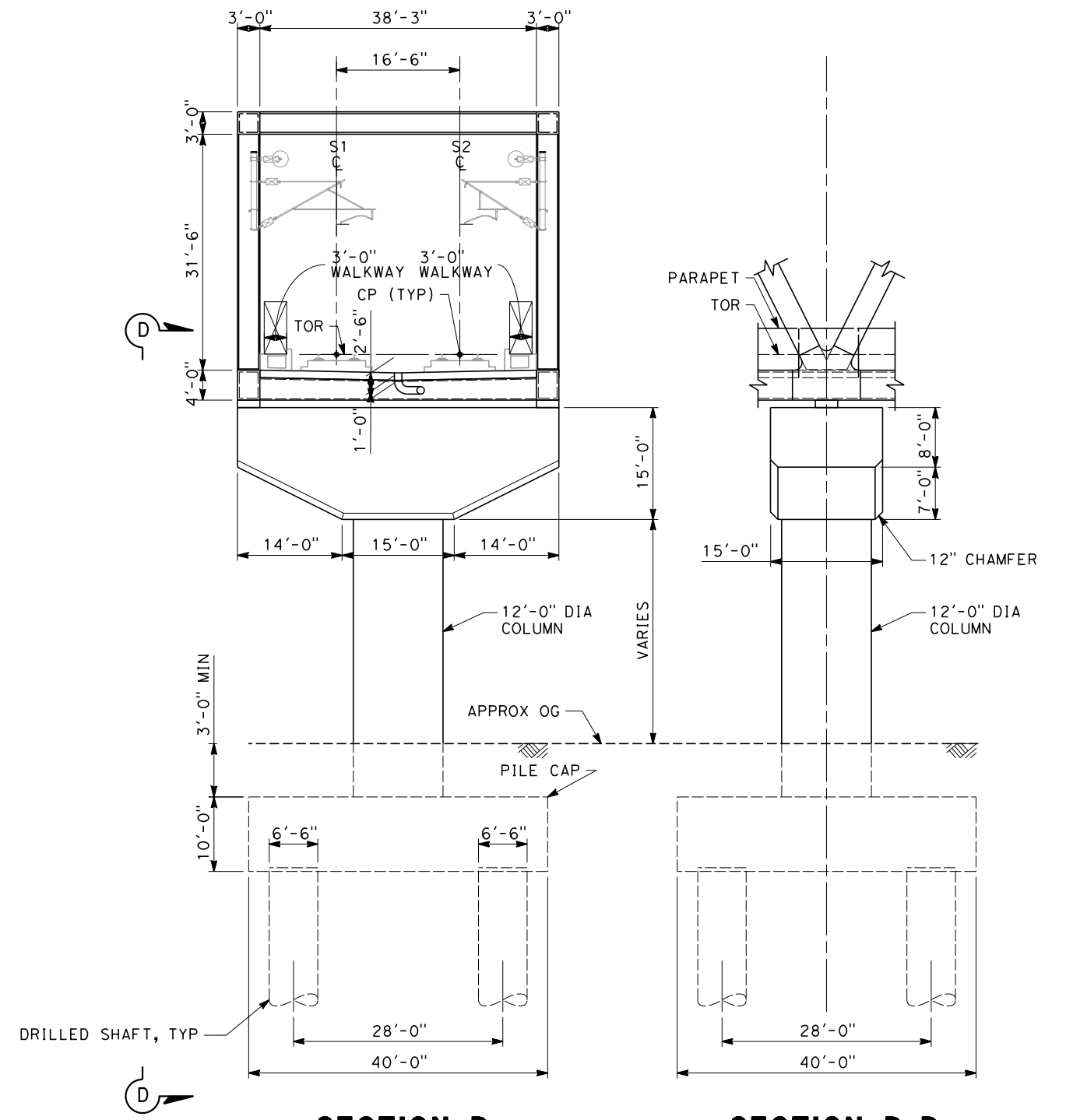
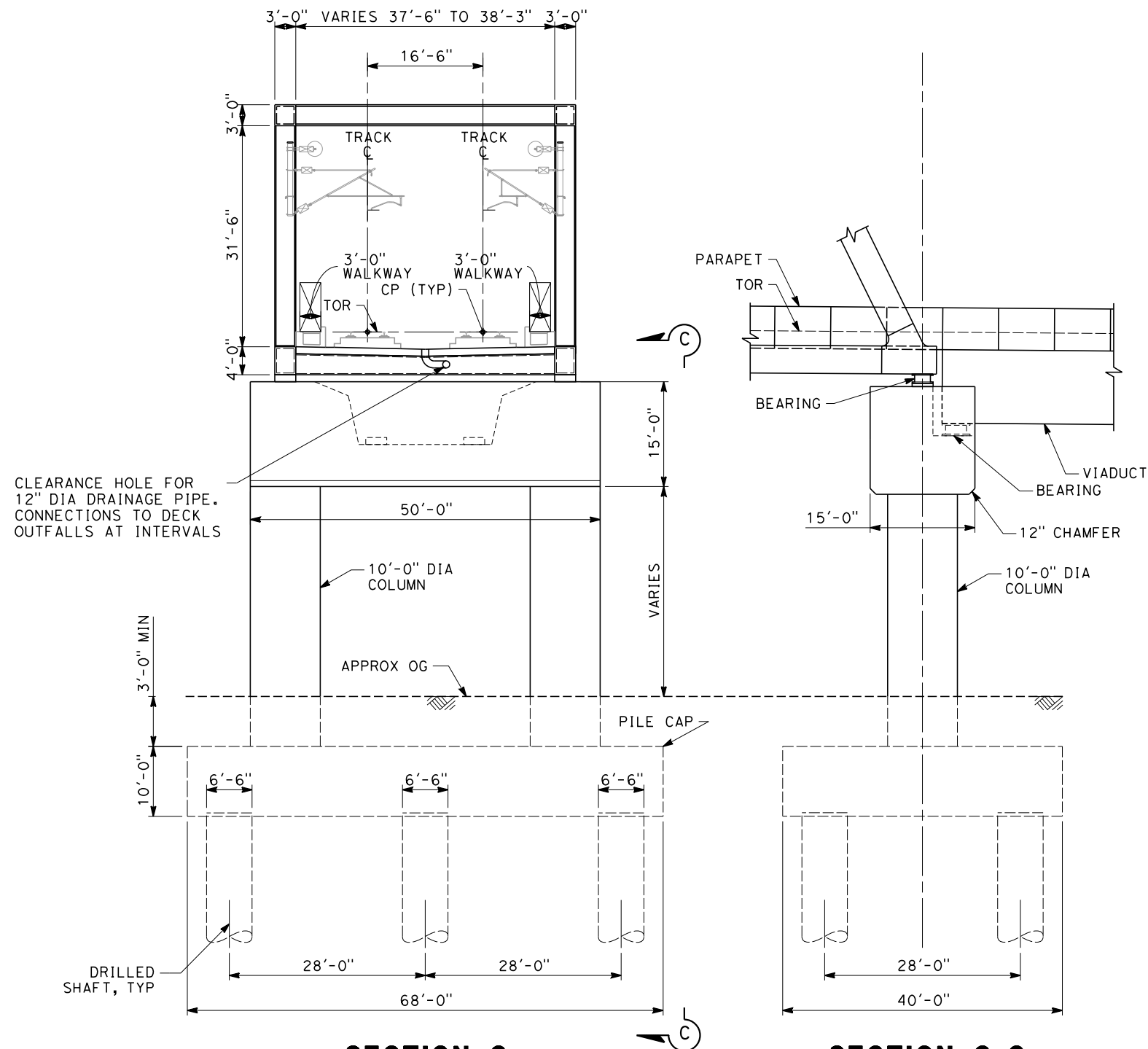
"S" 11195+00



## ADDENDUM 3 - RFP HSR 11-16

						DESIGNED BY A. ARMSTRONG	<b>PROPOSED PRELIMINARY DESIGN</b>			<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b> PACKAGE 1C TRACK STRUCTURES FRESNO VIADUCT TYPICAL SECTIONS	CONTRACT NO.
					DRAWN BY F. PALERMO	DRAWING NO. ST-J3008					
					CHECKED BY Q. LIU	SCALE AS SHOWN					
					IN CHARGE R. COFFIN	SHEET NO.					
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 06/06/12					

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## ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

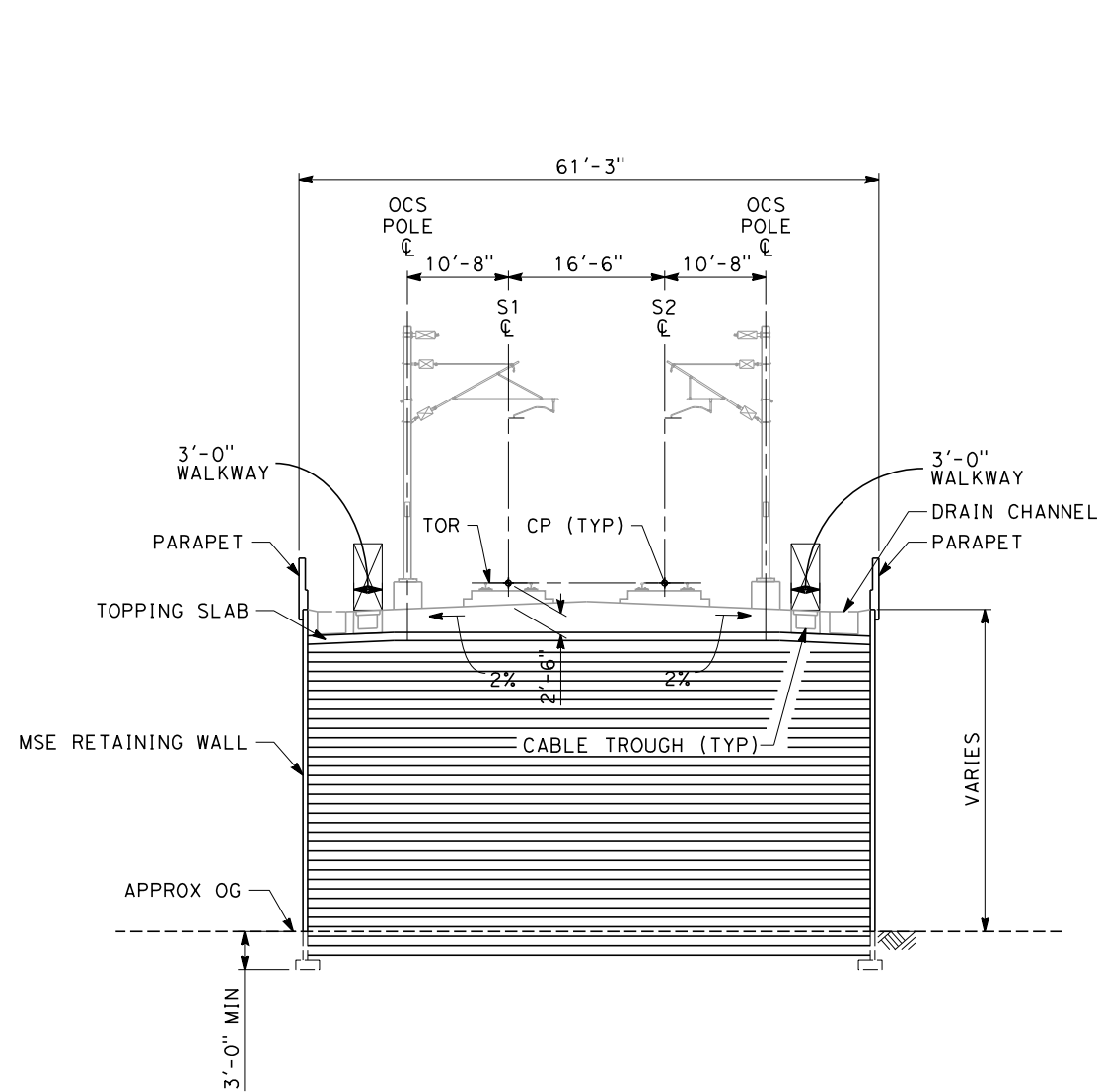
**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
TRACK STRUCTURES  
FRESNO VIADUCT  
TYPICAL SECTIONS

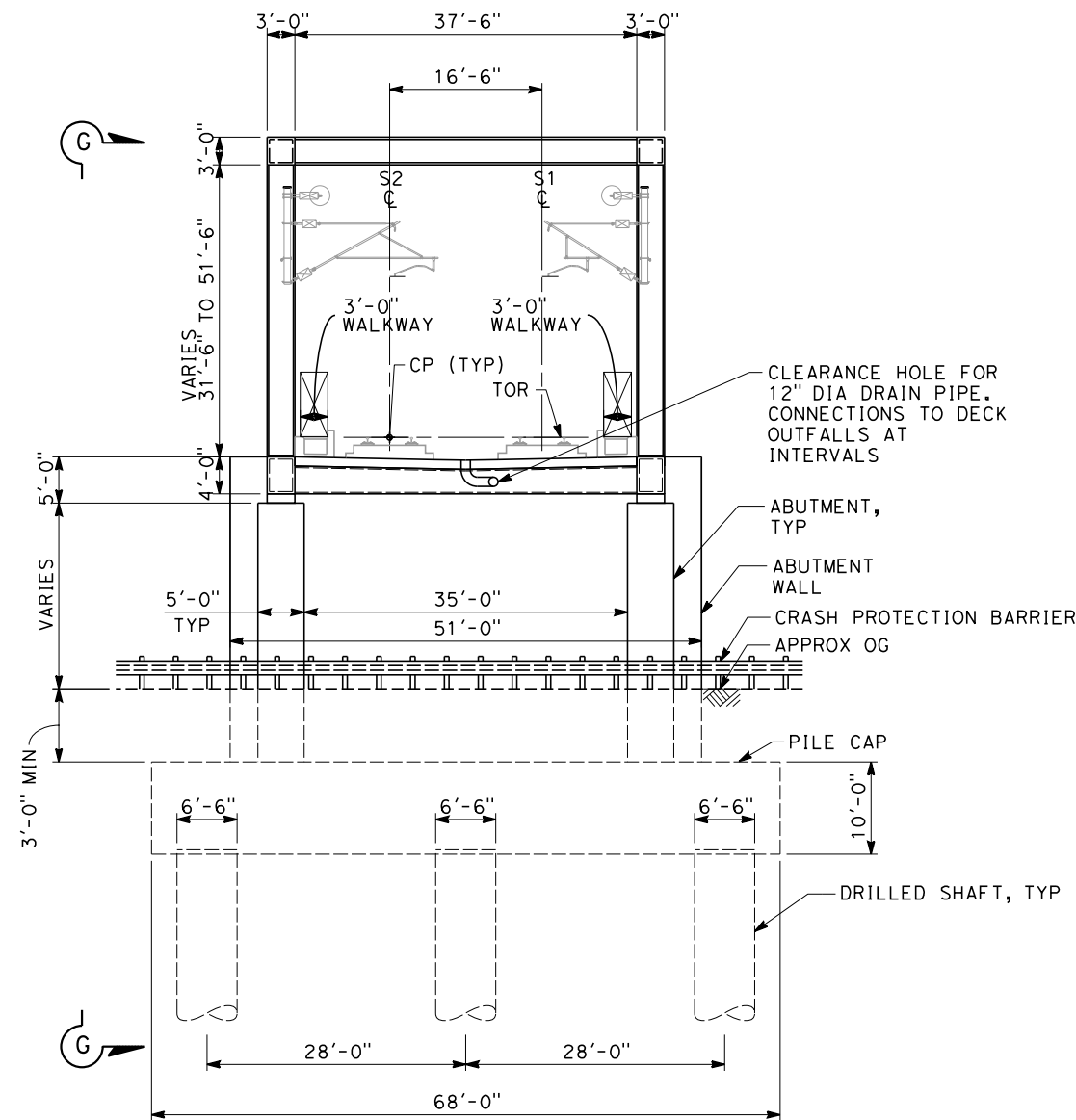
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DRAWING NO. ST-J3009
SCALE AS SHOWN
SHEET NO.

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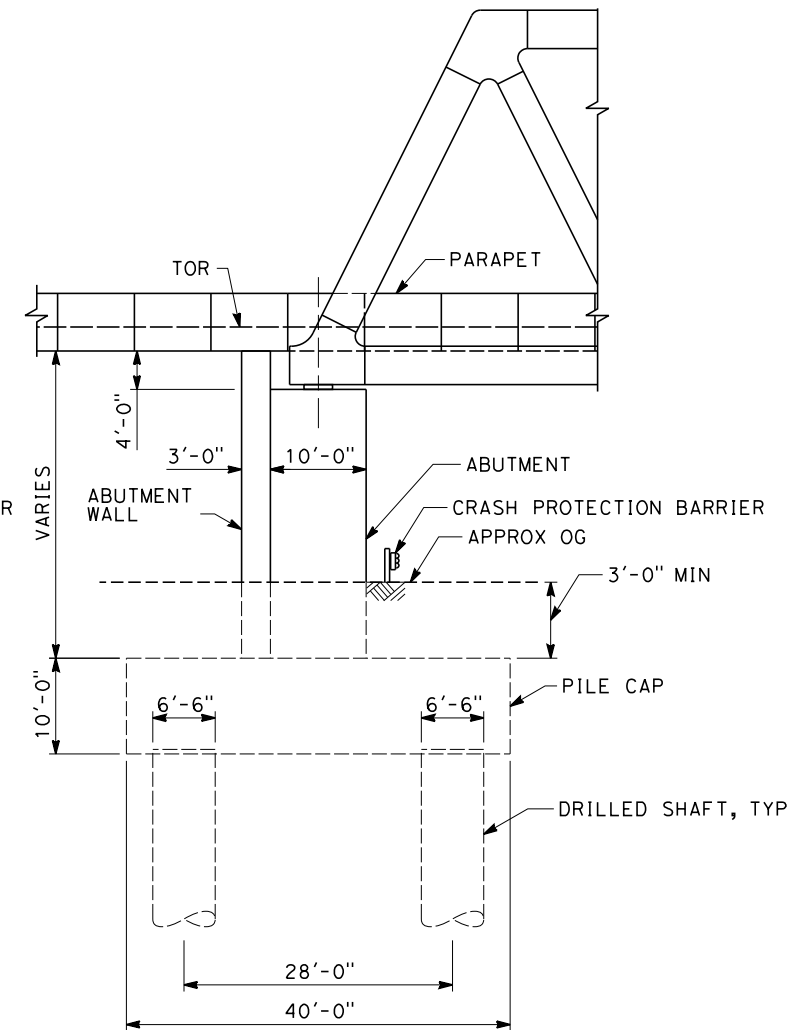
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STA 11216+00 THROUGH 11230+00

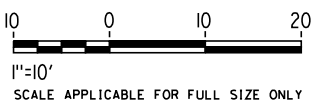


**SECTION F**

STA 11152+20  
(ABUTMENT 1)



**SECTION G-G**



**ADDENDUM 4 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION
A	07/16/12	FP	AA	RC	SECTION E EXTENT CHANGED

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 07/16/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



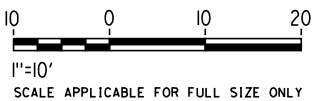
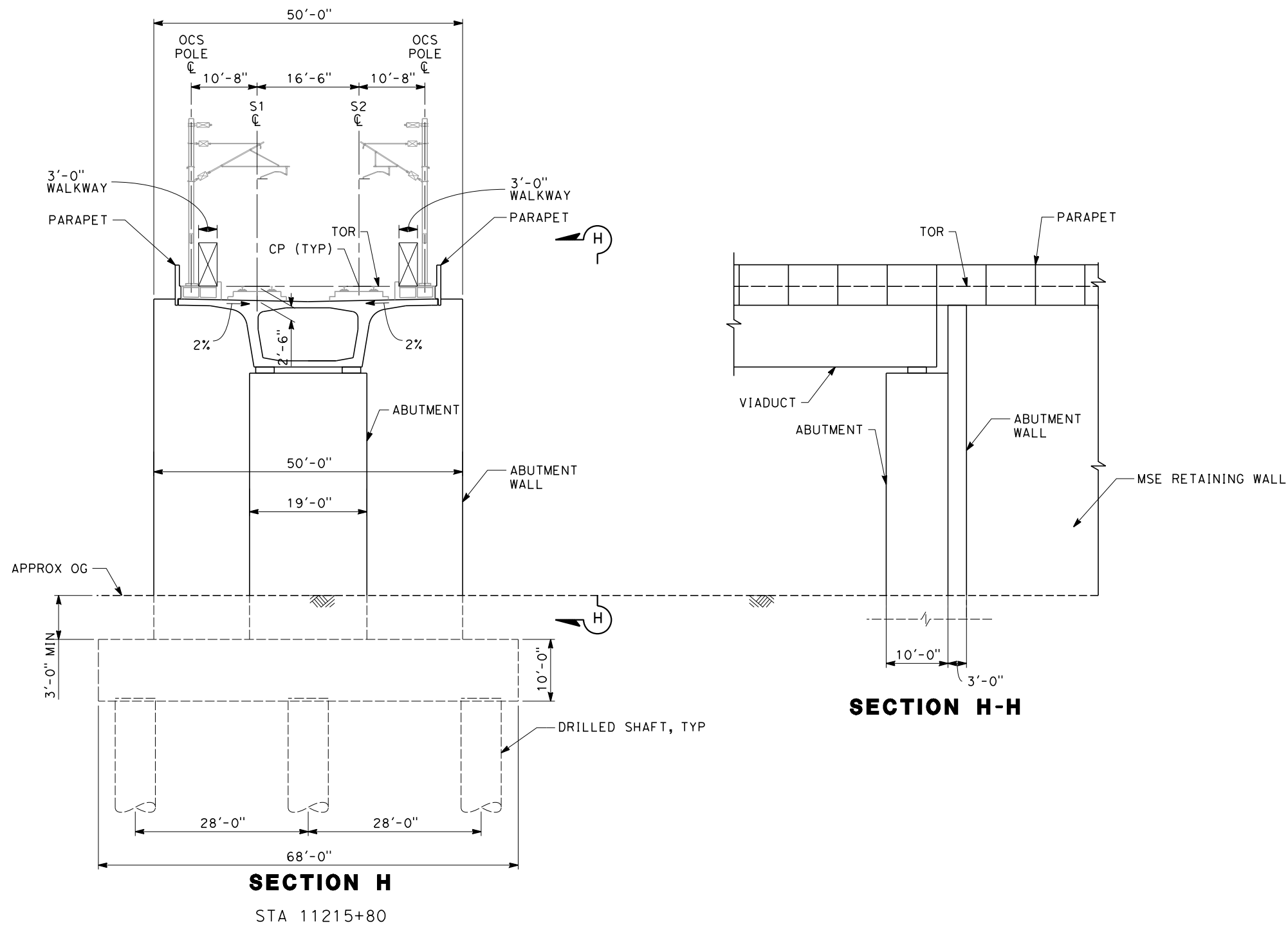
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
TRACK STRUCTURES  
FRESNO VIADUCT  
TYPICAL SECTIONS

CONTRACT NO.
DRAWING NO. ST-J3010-A4
SCALE AS SHOWN
SHEET NO.



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## ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

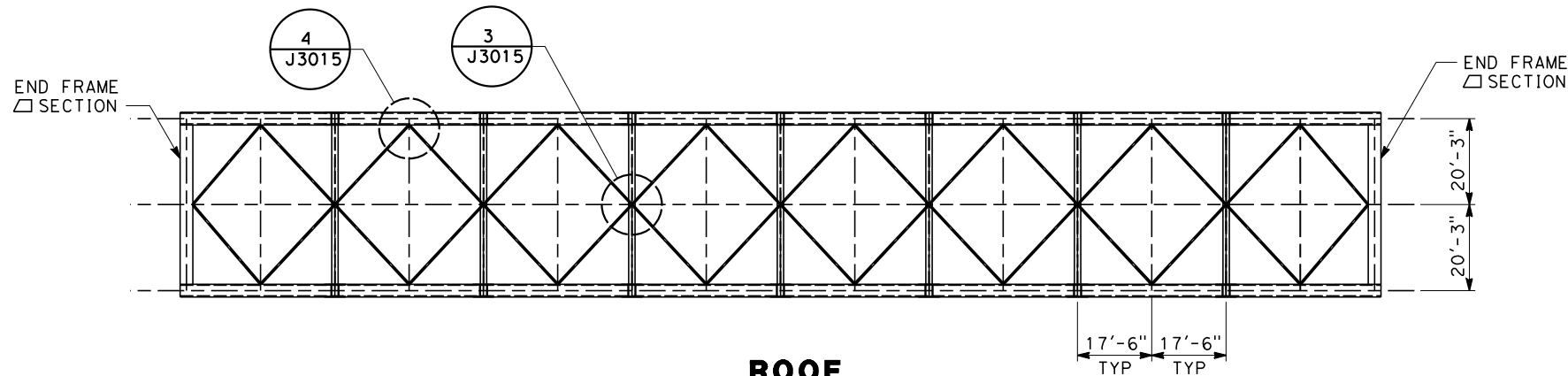


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

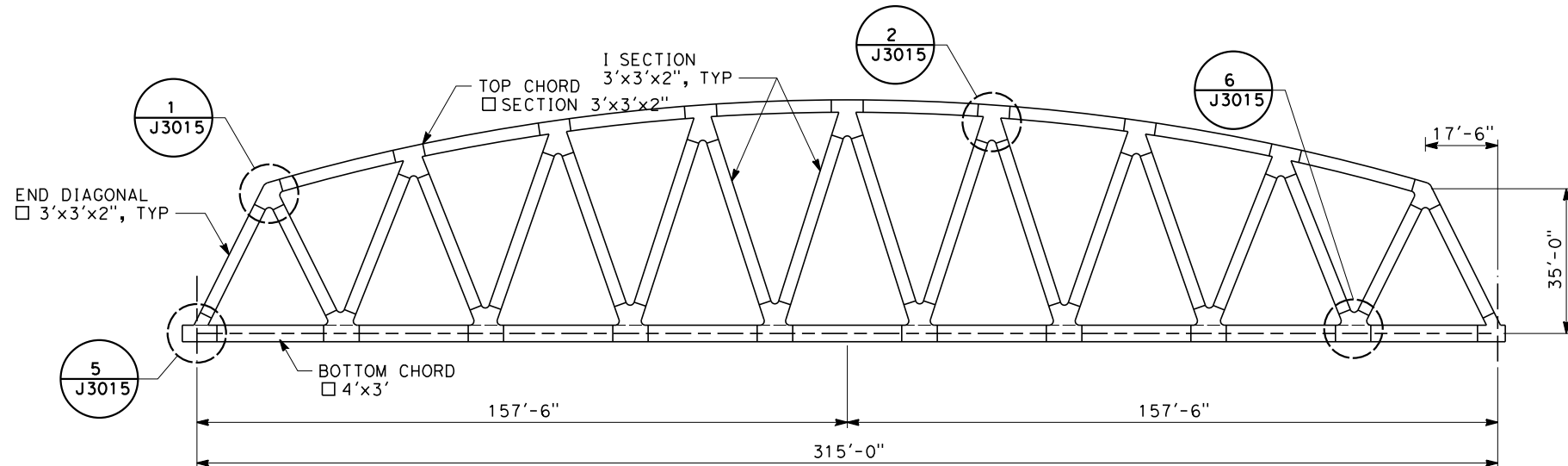
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TRACK STRUCTURES  
FRESNO VIADUCT  
TYPICAL SECTIONS

CONTRACT NO.
DRAWING NO. ST-J3011
SCALE AS SHOWN
SHEET NO.

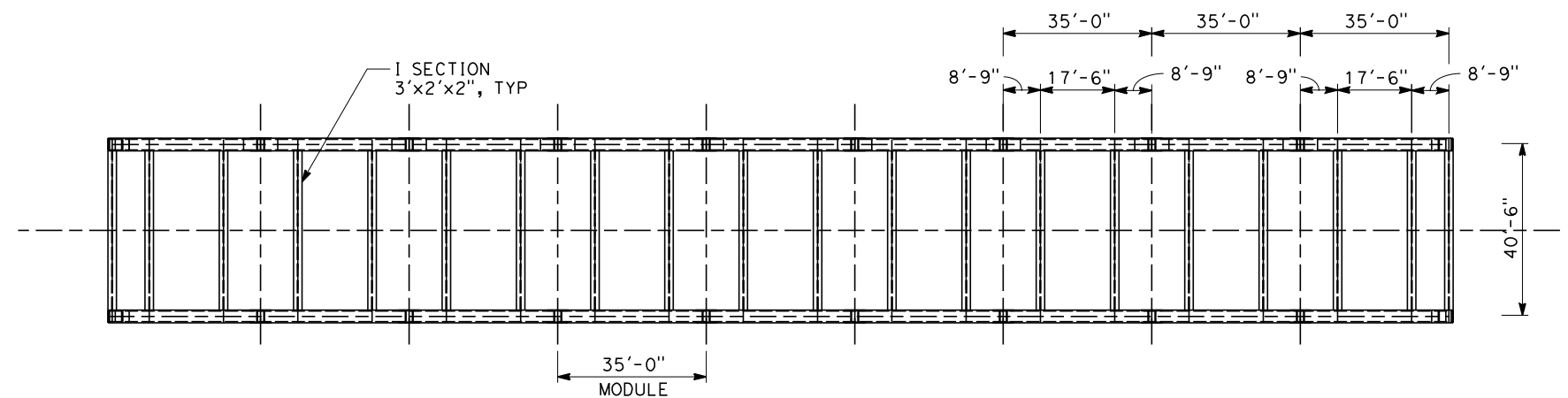
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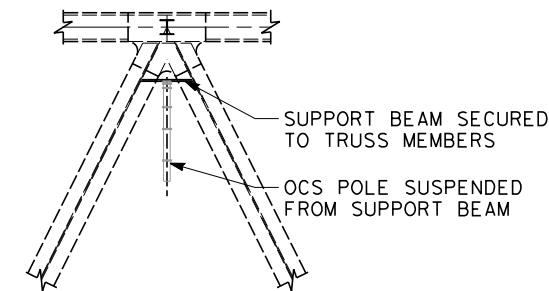
**ROOF**  
SCALE: 1" = 20'



**ELEVATION**  
SCALE: 1" = 20'



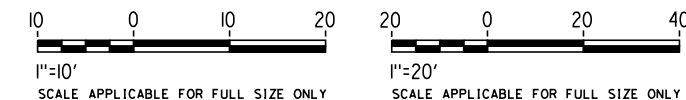
**DECK**  
SCALE: 1" = 20'



**PROPOSED OCS  
MOUNTING BRACKET**  
SCALE: 1" = 10'

NOTES:

ALL SECTIONS EXCEPT TOP CORD BRACING ARE BUILT UP FROM PLATE STEEL. IT IS ASSUMED (SUBJECT TO DETAILED DESIGN) THAT THE SECTIONS CAN BE FABRICATED USING PARTIAL PENETRATION FILLET WELDS IN ALL AREAS WHERE THE SECTION IS SUBJECT TO PREDOMINANTLY AXIAL FORCES.



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

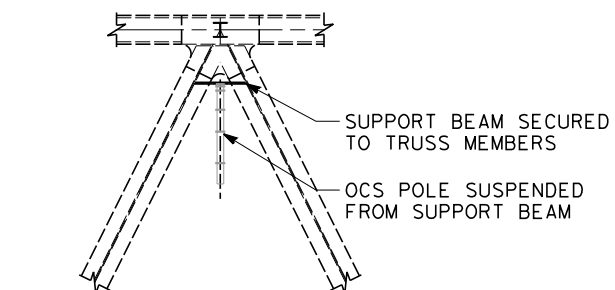
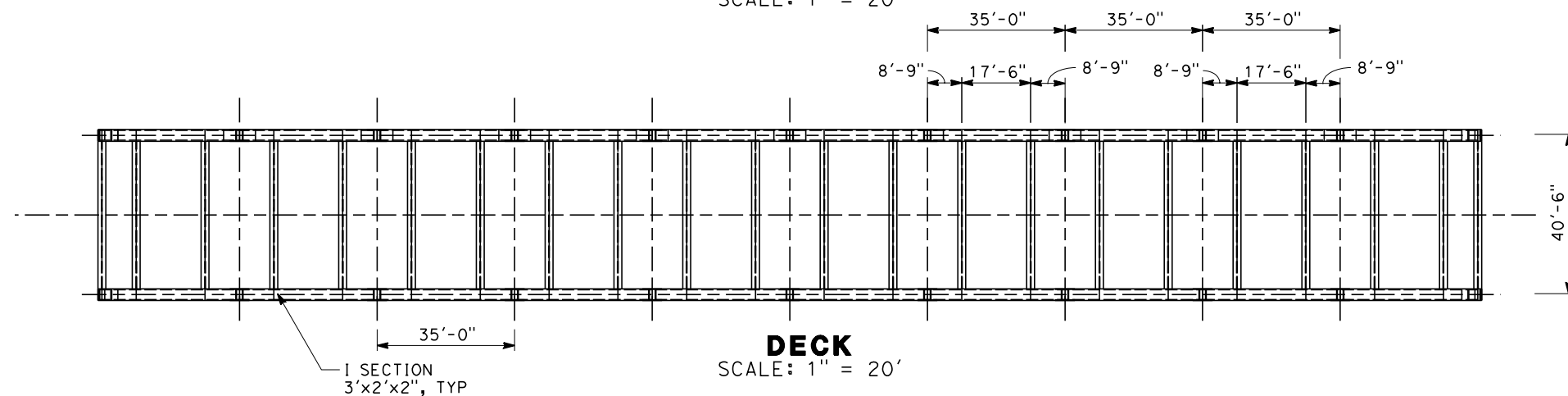
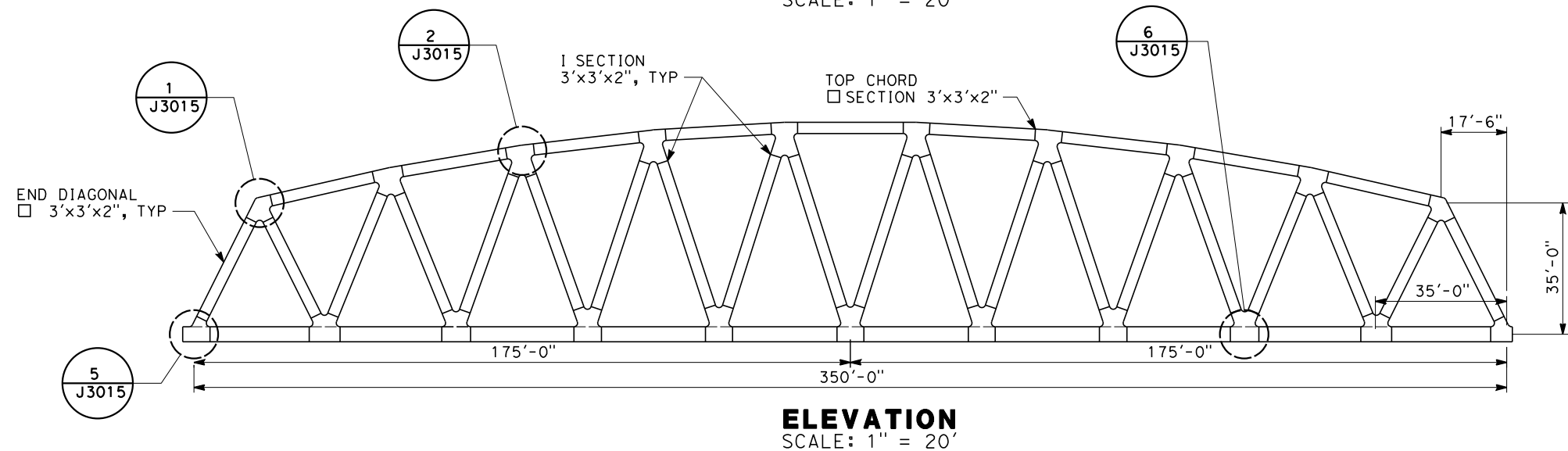
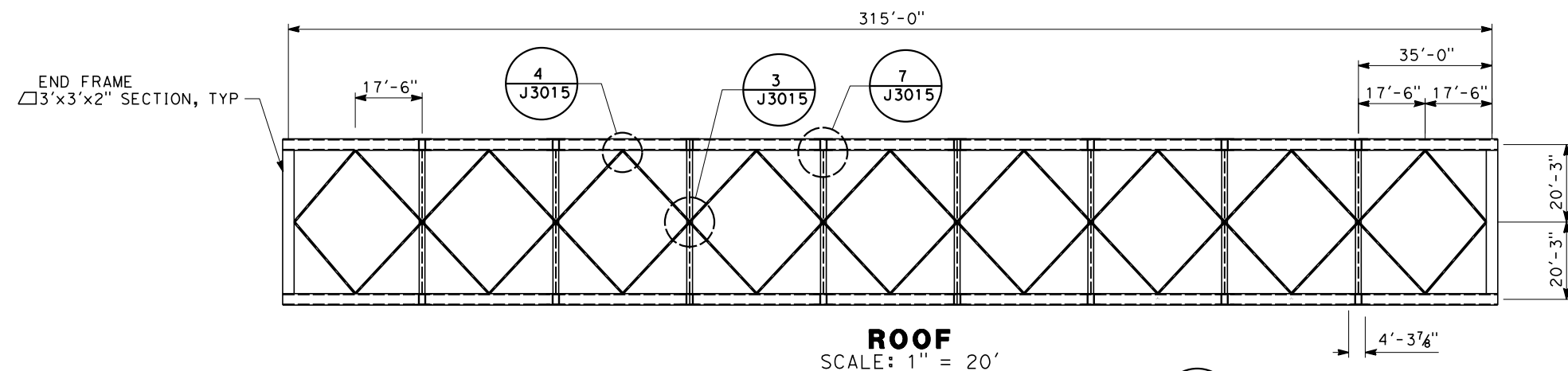
**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
FRESNO VIADUCT  
GOLDEN STATE BLVD BRIDGE  
GENERAL ARRANGEMENT

CONTRACT NO.
DRAWING NO. ST-J3012
SCALE AS SHOWN
SHEET NO.

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**PROPOSED OCS MOUNTING BRACKET**  
SCALE: 1" = 10'

NOTES:

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**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

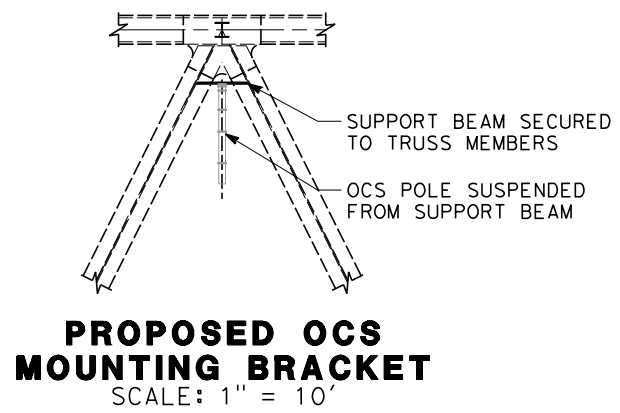
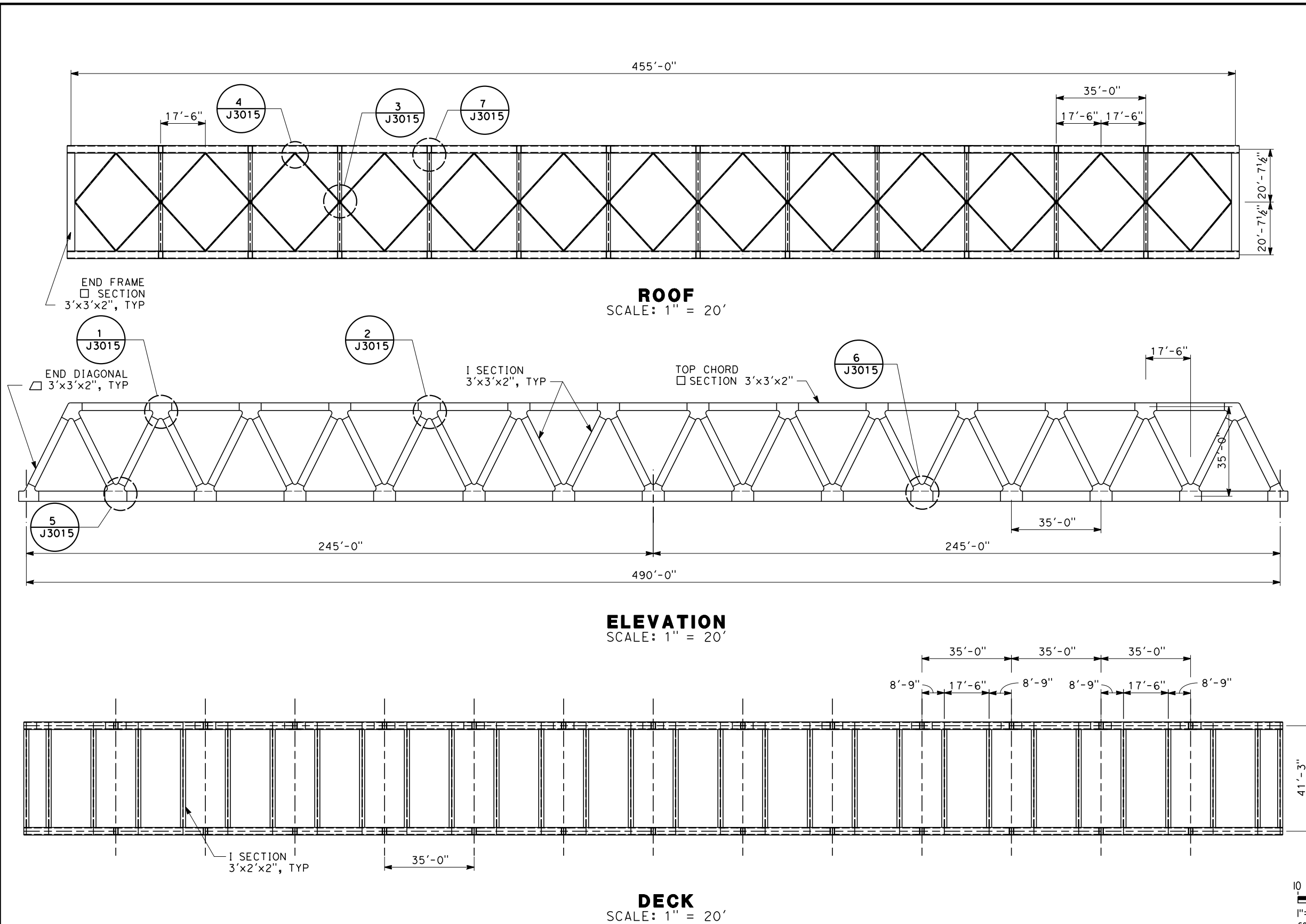


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

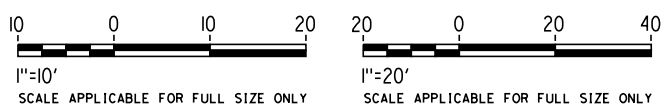
PACKAGE 1C  
FRESNO VIADUCT  
S CEDAR AVE BRIDGE  
GENERAL ARRANGEMENT

CONTRACT NO.
DRAWING NO. ST-J3013
SCALE AS SHOWN
SHEET NO.

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NOTES:  
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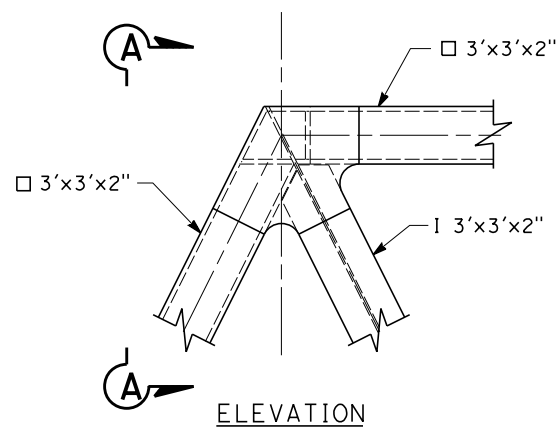


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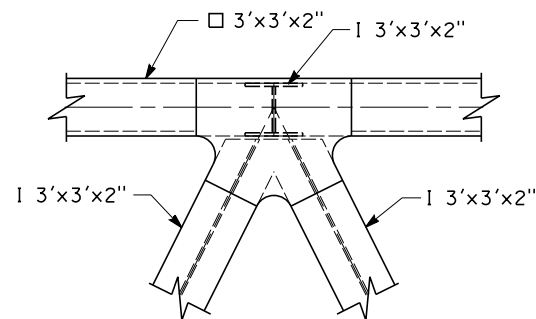
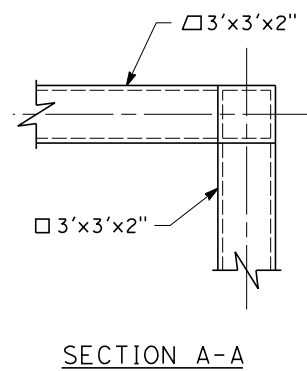
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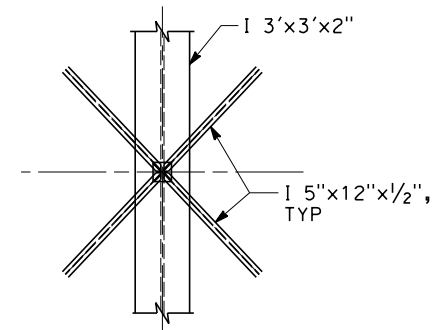
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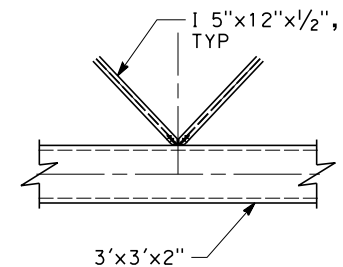
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SCALE: 1" = 5'



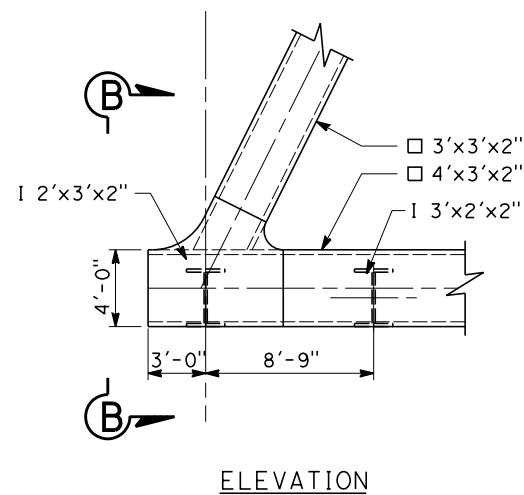
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SCALE: 1" = 5'



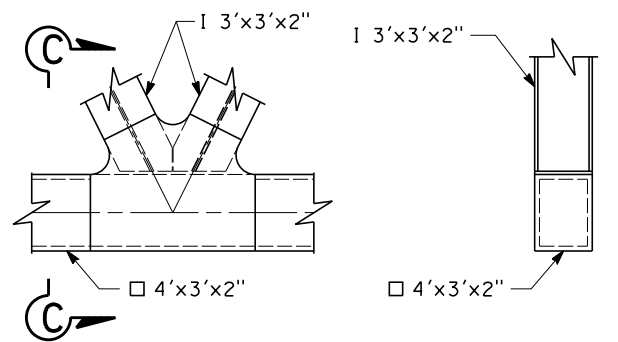
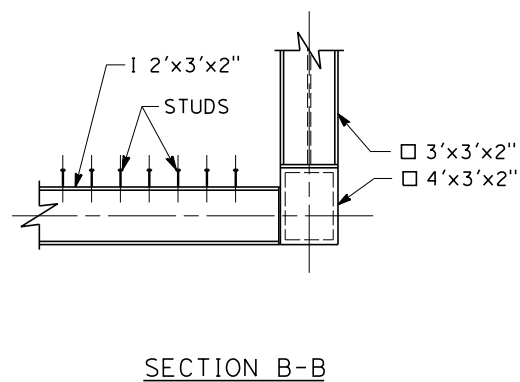
**DETAIL 3**  
SCALE: 1" = 5'



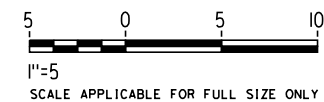
**DETAIL 4**  
SCALE: 1" = 5'



**DETAIL 5**  
SCALE: 1" = 5'



**DETAIL 6**  
SCALE: 1" = 5'



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

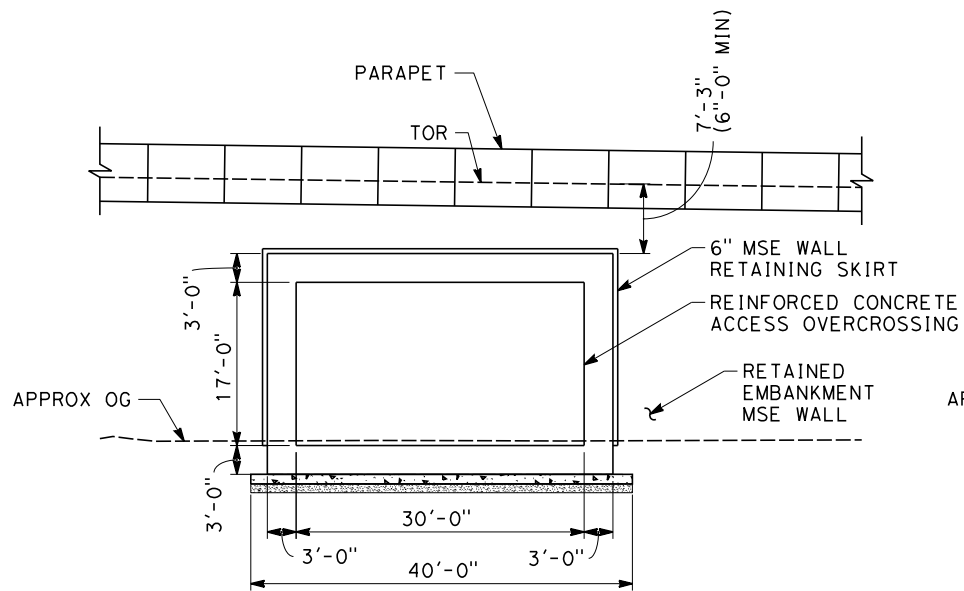
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<b>NOT FOR CONSTRUCTION</b>



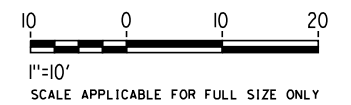
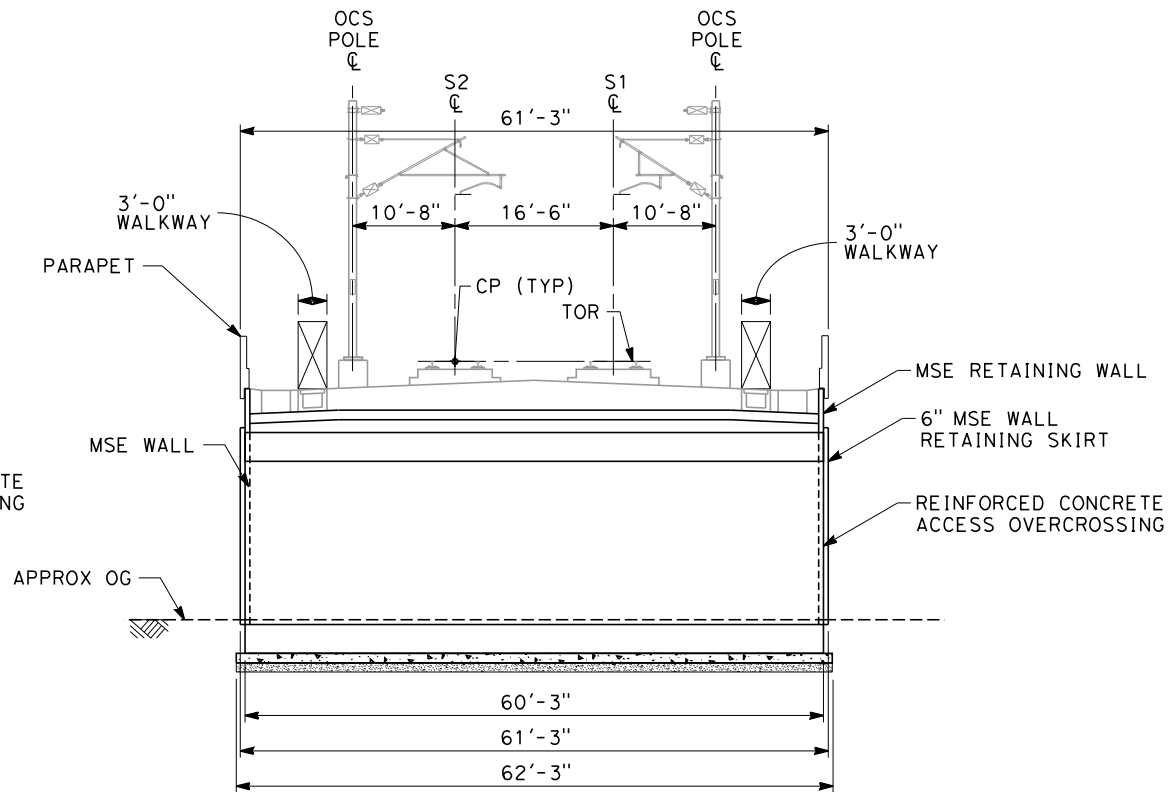
<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b>
PACKAGE 1C FRESNO VIADUCT TRUSS STEELWORK TYPICAL DETAILS

CONTRACT NO.
DRAWING NO. ST-J3015
SCALE AS SHOWN
SHEET NO.

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**SECTION J**  
STA 11218+20



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY Q. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

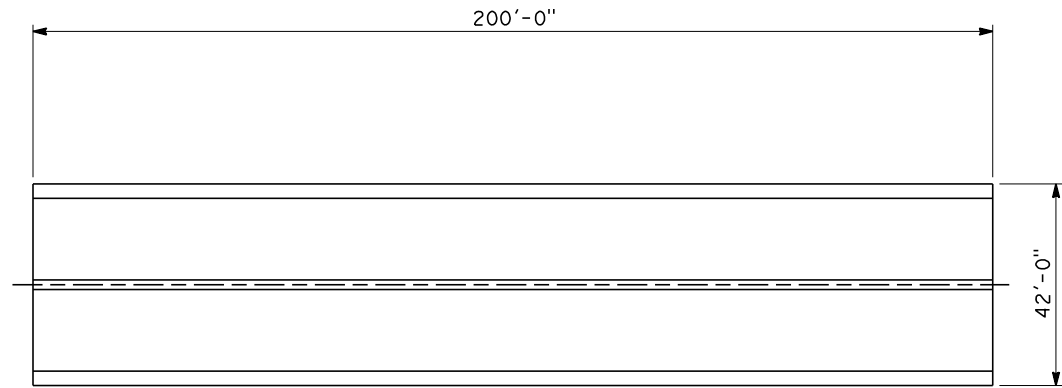


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

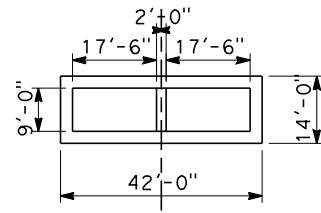
PACKAGE 1C  
TRACK STRUCTURES  
FRESNO VIADUCT  
TYPICAL SECTIONS

CONTRACT NO.
DRAWING NO. ST-J3016
SCALE AS SHOWN
SHEET NO.

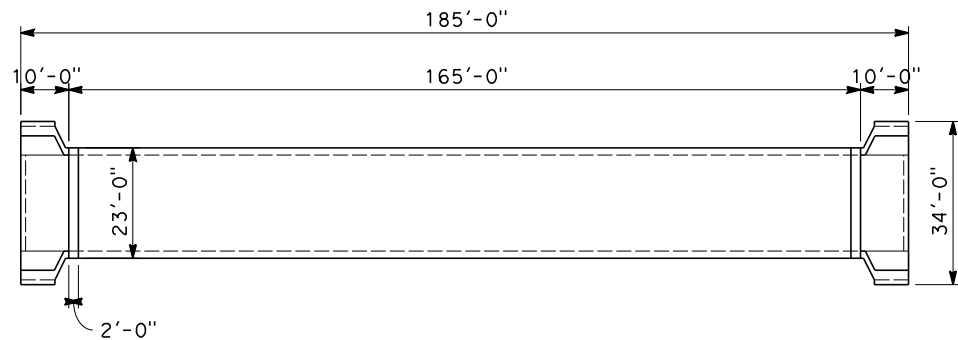
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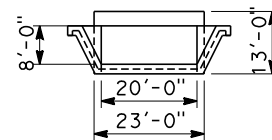
**CENTRAL CANAL  
CULVERT PLAN**  
SCALE: 1" = 20'



**CENTRAL CANAL  
CULVERT ELEVATION**  
SCALE: 1" = 20'



**VIAU CANAL  
CULVERT PLAN**  
SCALE: 1" = 20'



**VIAU CANAL  
CULVERT ELEVATION**  
SCALE: 1" = 20'

**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

<b>PROPOSED PRELIMINARY DESIGN</b>
<b>NOT FOR CONSTRUCTION</b>

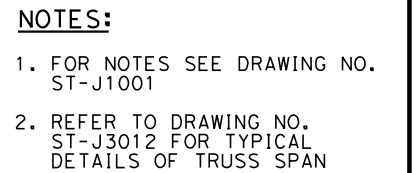


<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b>
PACKAGE 1C TRACK STRUCTURES TYPICAL SECTIONS CANAL CULVERTS

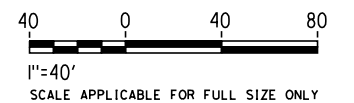
CONTRACT NO.
DRAWING NO. ST-J3017
SCALE AS SHOWN
SHEET NO.









SCALE 1" = 40'



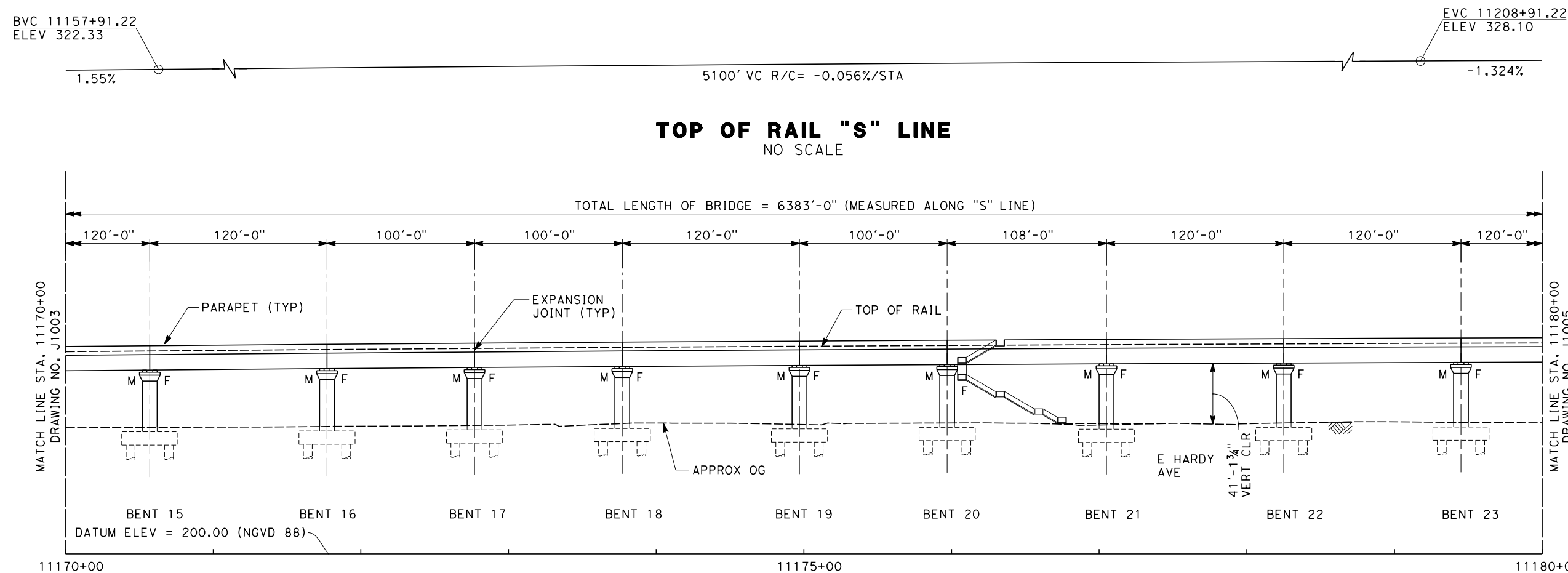
SCALE 1" = 40'

**ADDENDUM 3 - RFP HSR 11-16**

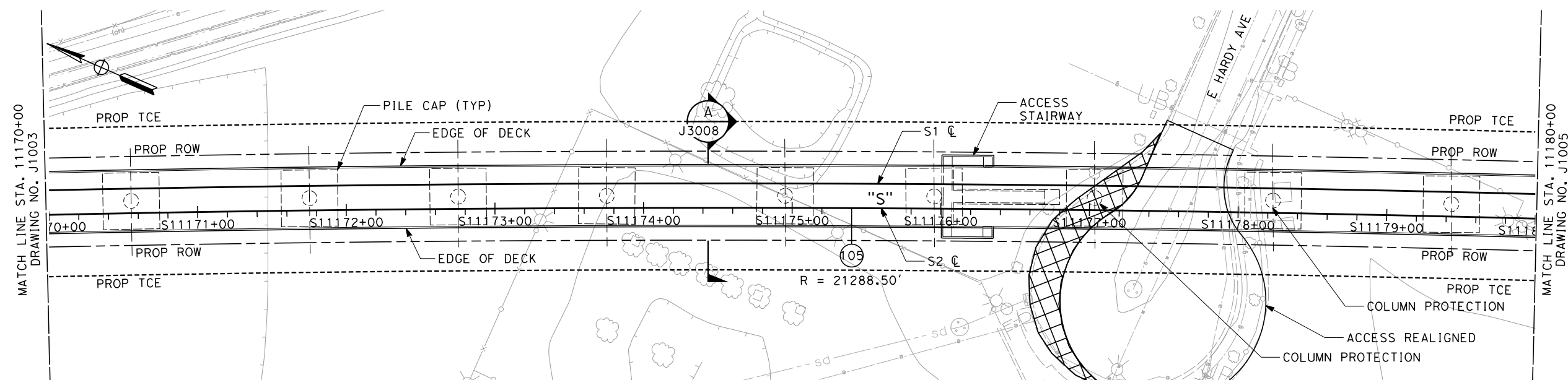
						DESIGNED BY <b>A. ARMSTRONG</b>	<b>PROPOSED PRELIMINARY DESIGN</b>  <b>NOT FOR CONSTRUCTION</b>	 	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b> PACKAGE 1C TRACK STRUCTURES FRESNO VIADUCT PLAN AND ELEVATION	CONTRACT NO.
						DRAWN BY <b>F. PALERMO</b>				DRAWING NO. ST-J1002
						CHECKED BY <b>Q. LIU</b>				SCALE AS SHOWN
						IN CHARGE <b>R. COFFIN</b>				SHEET NO.
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 06/06/12				

CONTRACT NO.
DRAWING NO. ST-J1003
SCALE AS SHOWN
SHEET NO.

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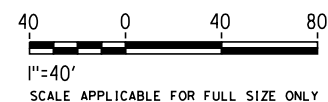
**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

**NOTES:**

1. FOR NOTES SEE DRAWING NO. ST-J1001



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

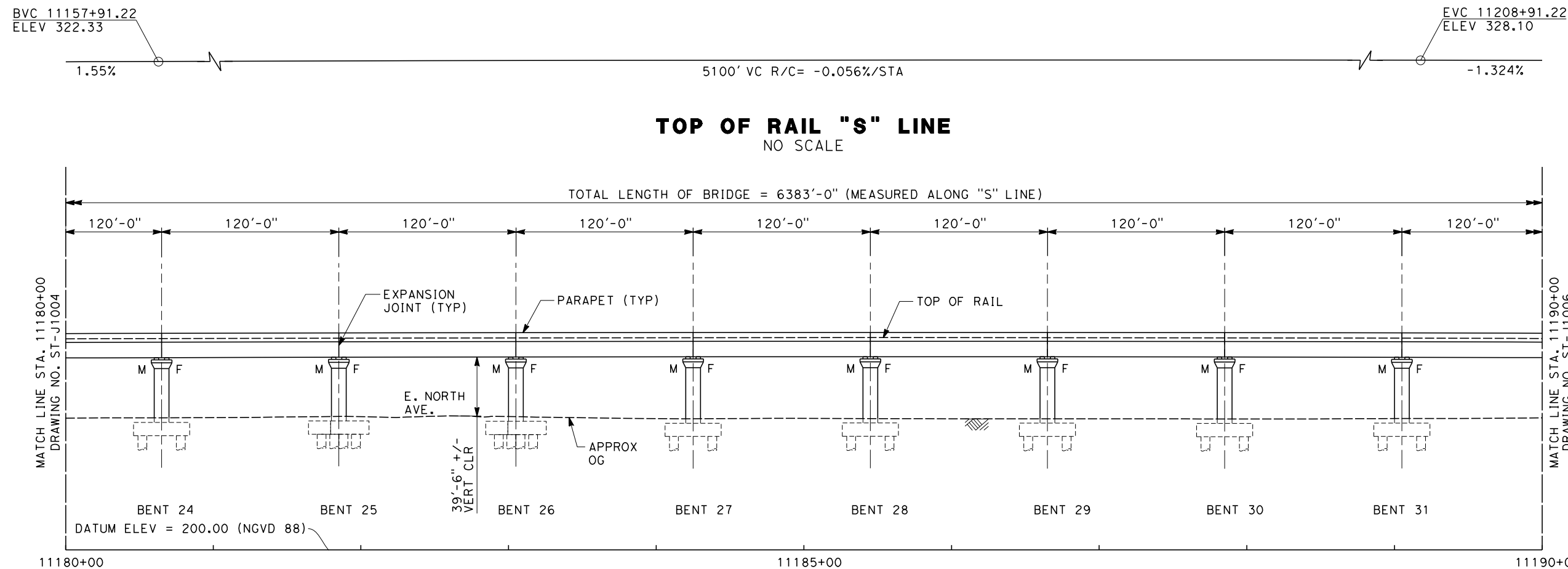
<b>PROPOSED PRELIMINARY DESIGN</b>
<b>NOT FOR CONSTRUCTION</b>



<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b>
PACKAGE 1C TRACK STRUCTURES FRESNO VIADUCT PLAN AND ELEVATION

CONTRACT NO.
DRAWING NO. ST-J1004
SCALE AS SHOWN
SHEET NO.

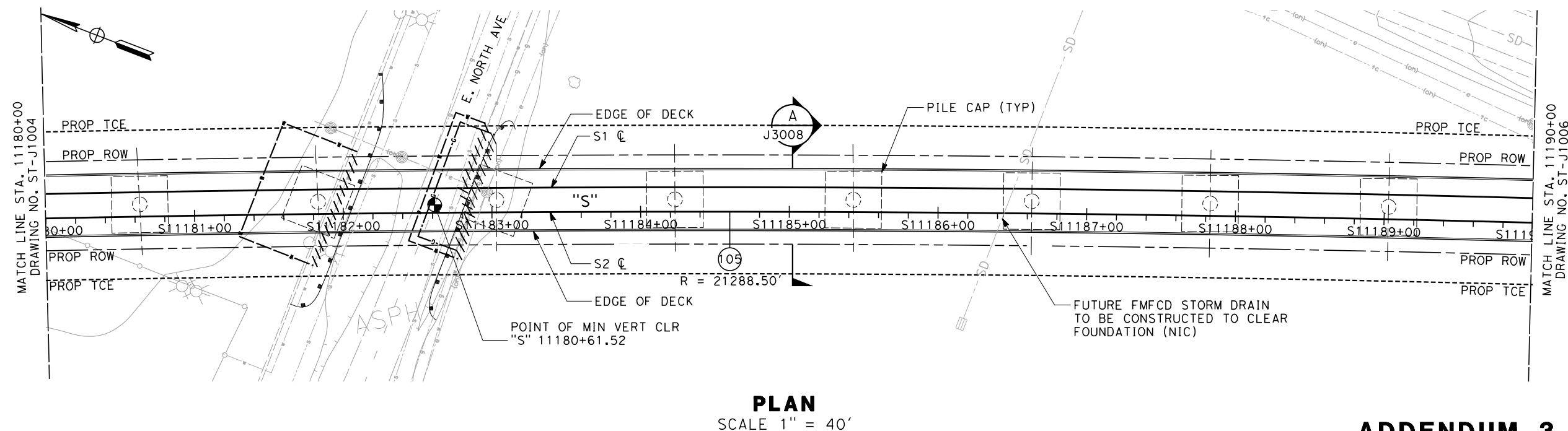
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**NOTES:**

1. FOR NOTES SEE DRAWING NO. ST-J1001

**ELEVATION**  
SCALE 1" = 40'



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

<b>PROPOSED PRELIMINARY DESIGN</b>
<b>NOT FOR CONSTRUCTION</b>

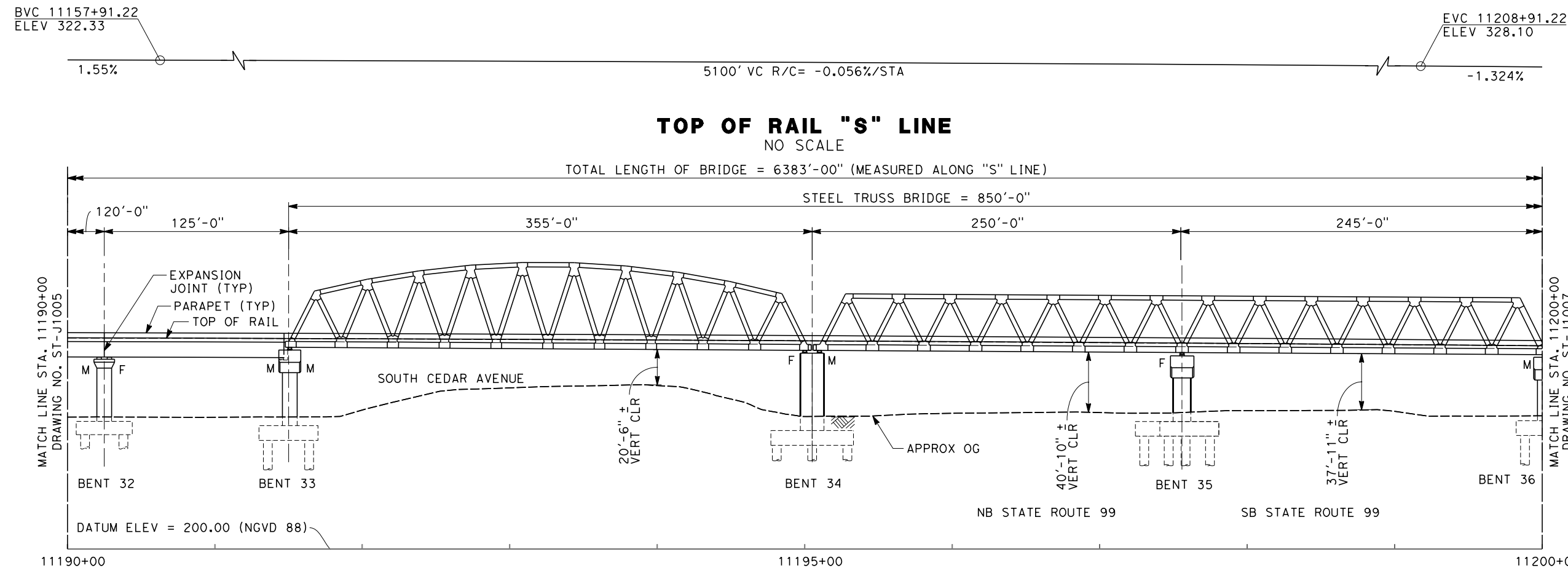


<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b>
PACKAGE 1C TRACK STRUCTURES FRESNO VIADUCT PLAN AND ELEVATION

CONTRACT NO.
DRAWING NO. ST-J1005
SCALE AS SHOWN
SHEET NO.



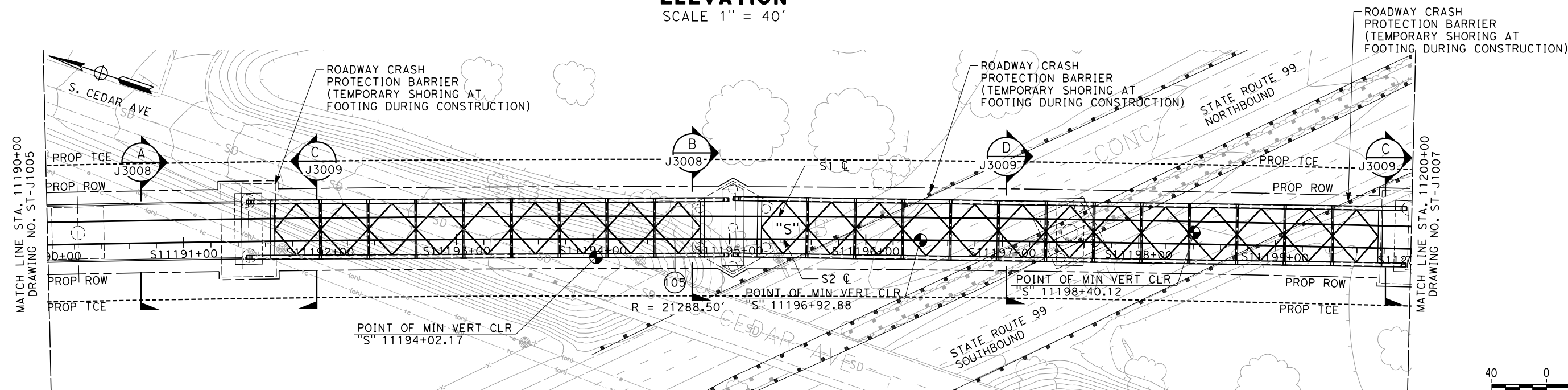
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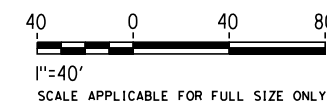
**NOTES:**

1. FOR NOTES SEE DRAWING NO. ST-J1001
2. REFER TO DRAWING NO. ST-J3012 FOR TYPICAL DETAILS OF TRUSS SPAN

**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



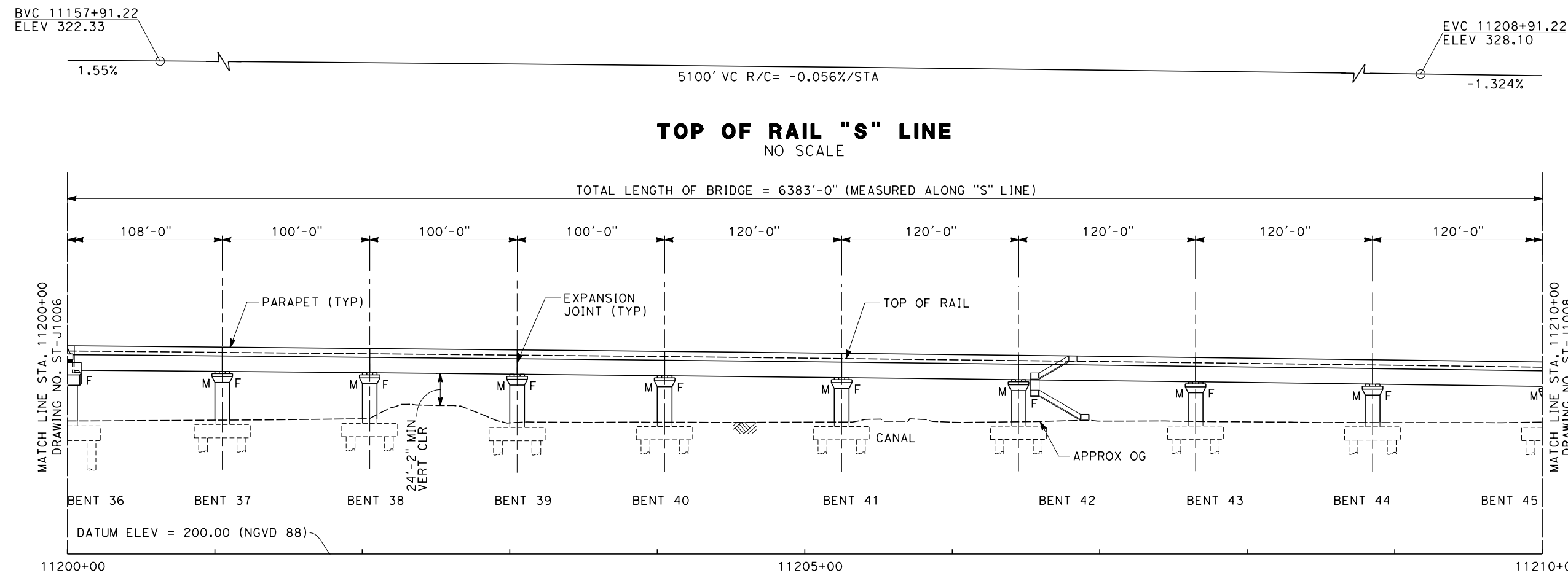
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
TRACK STRUCTURES  
FRESNO VIADUCT  
PLAN AND ELEVATION

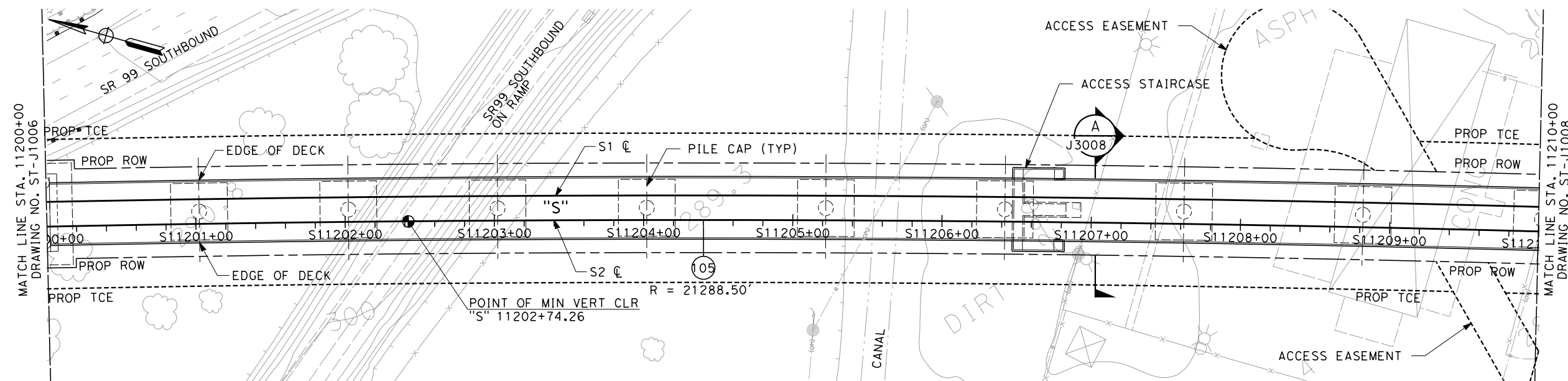
CONTRACT NO.
DRAWING NO. ST-J1006
SCALE AS SHOWN
SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16

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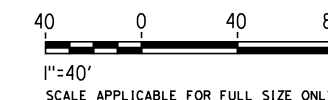
**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'

**NOTES:**

1. FOR NOTES SEE DRAWING NO. ST-J1001



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

<b>PROPOSED PRELIMINARY DESIGN</b>
<b>NOT FOR CONSTRUCTION</b>

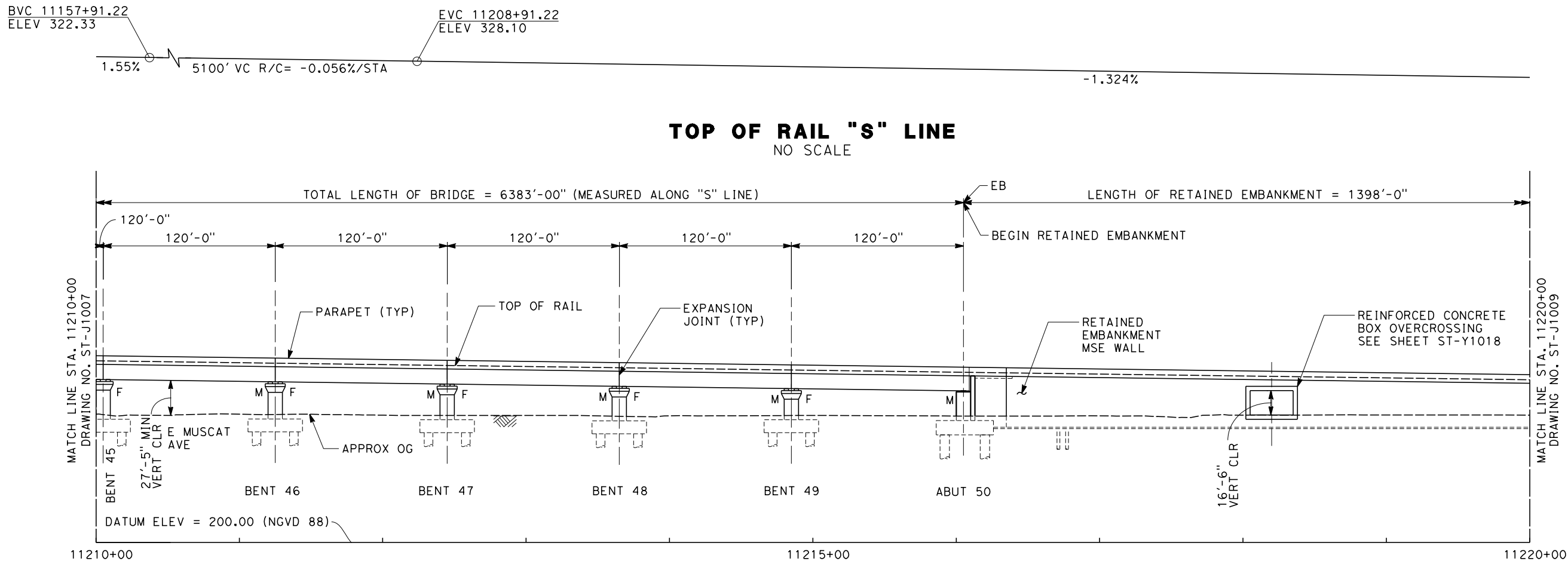


<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b>
PACKAGE 1C TRACK STRUCTURES FRESNO VIADUCT PLAN AND ELEVATION

CONTRACT NO.
DRAWING NO. ST-J1007
SCALE AS SHOWN
SHEET NO.

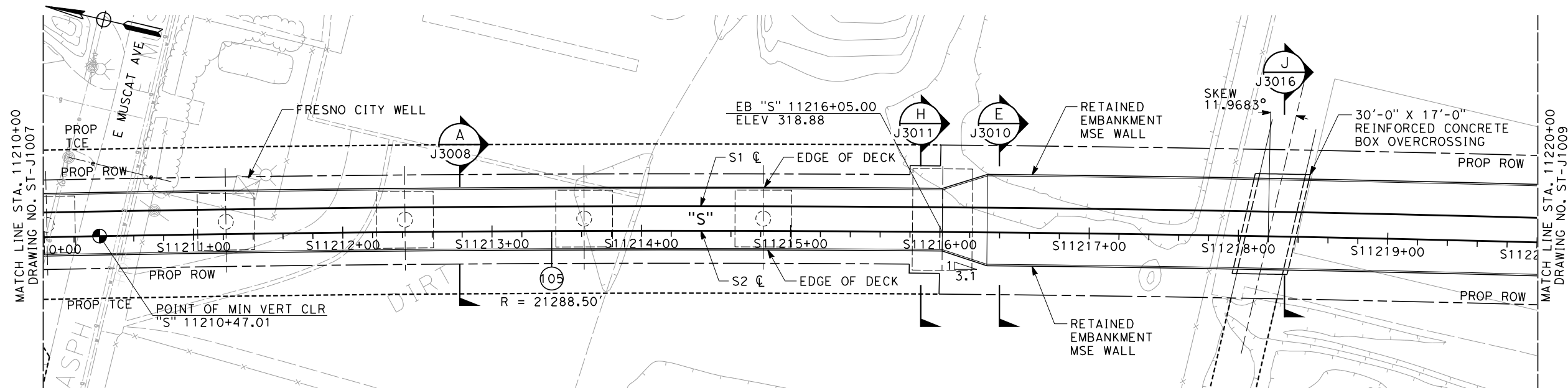
06/29/2012 ADDENDUM 3 - RFP HSR 11-16

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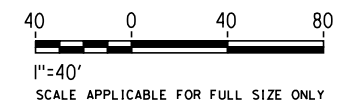


**NOTES:**  
1. FOR NOTES SEE DRAWING NO. ST-J1001

**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

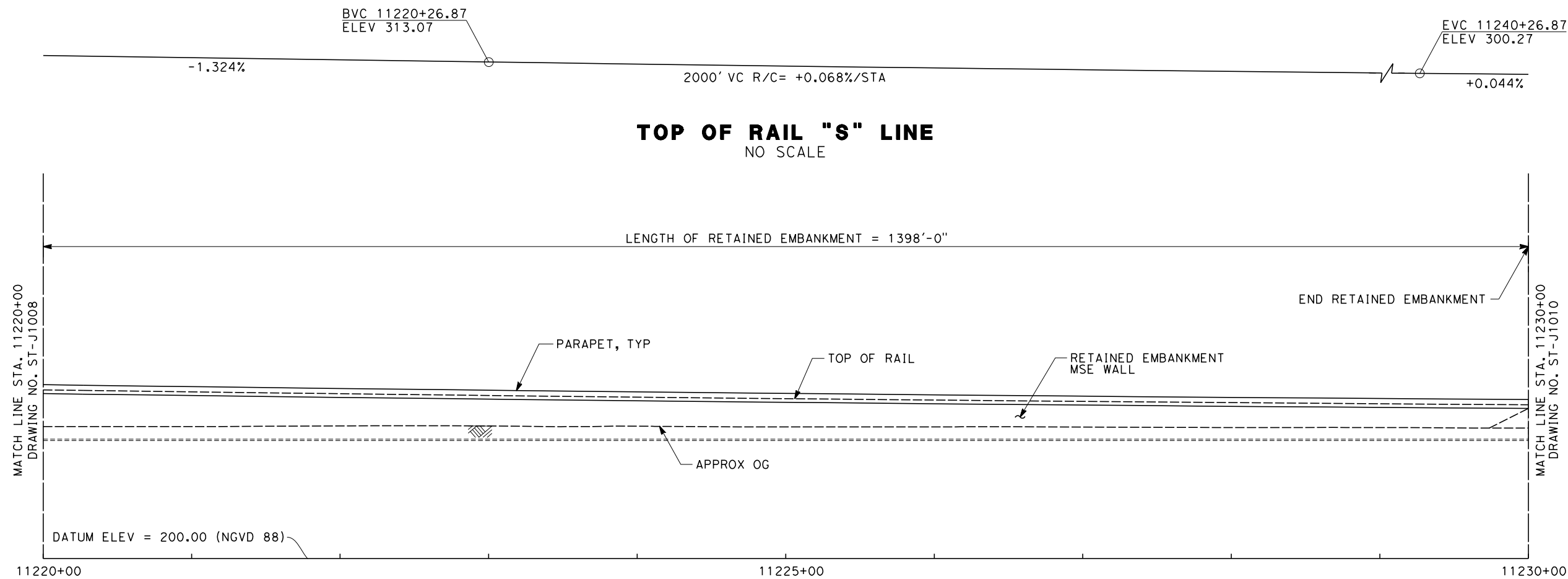
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<b>NOT FOR CONSTRUCTION</b>



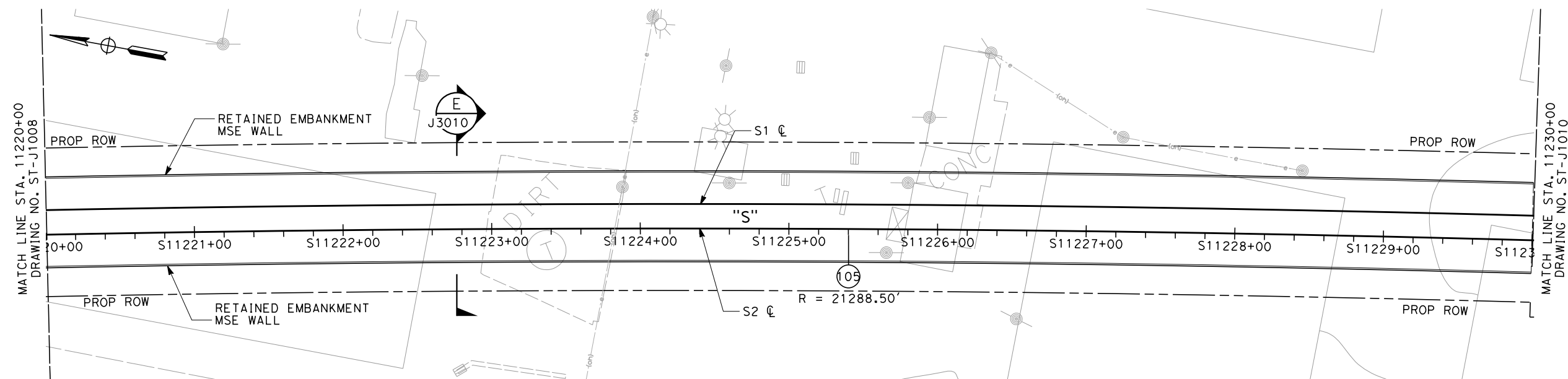
<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b>
PACKAGE 1C TRACK STRUCTURES FRESNO VIADUCT PLAN AND ELEVATION

CONTRACT NO.
DRAWING NO. ST-J1008
SCALE AS SHOWN
SHEET NO.

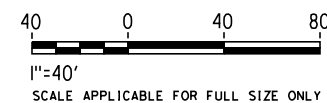
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**ELEVATION**  
SCALE 1" = 40'



**PLAN**  
SCALE 1" = 40'



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. ARMSTRONG
DRAWN BY F. PALERMO
CHECKED BY O. LIU
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



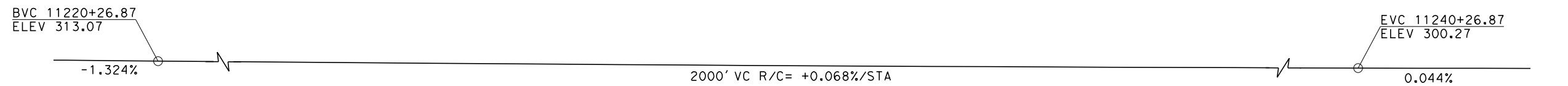
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
TRACK STRUCTURES  
FRESNO VIADUCT  
PLAN AND ELEVATION

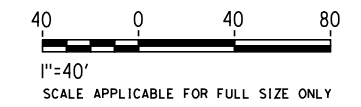
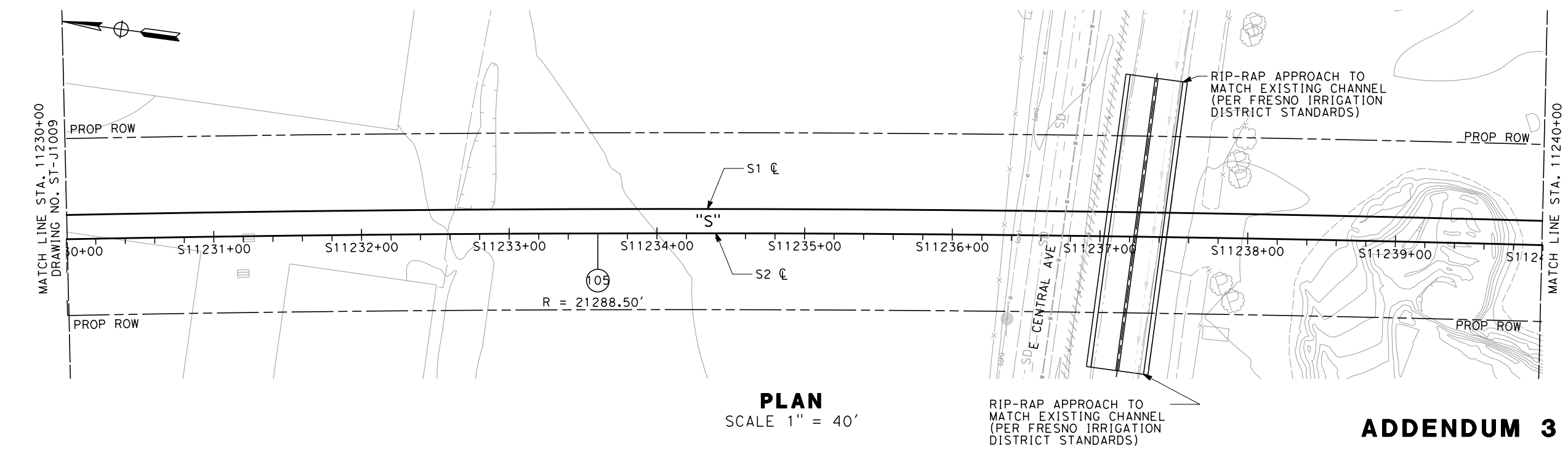
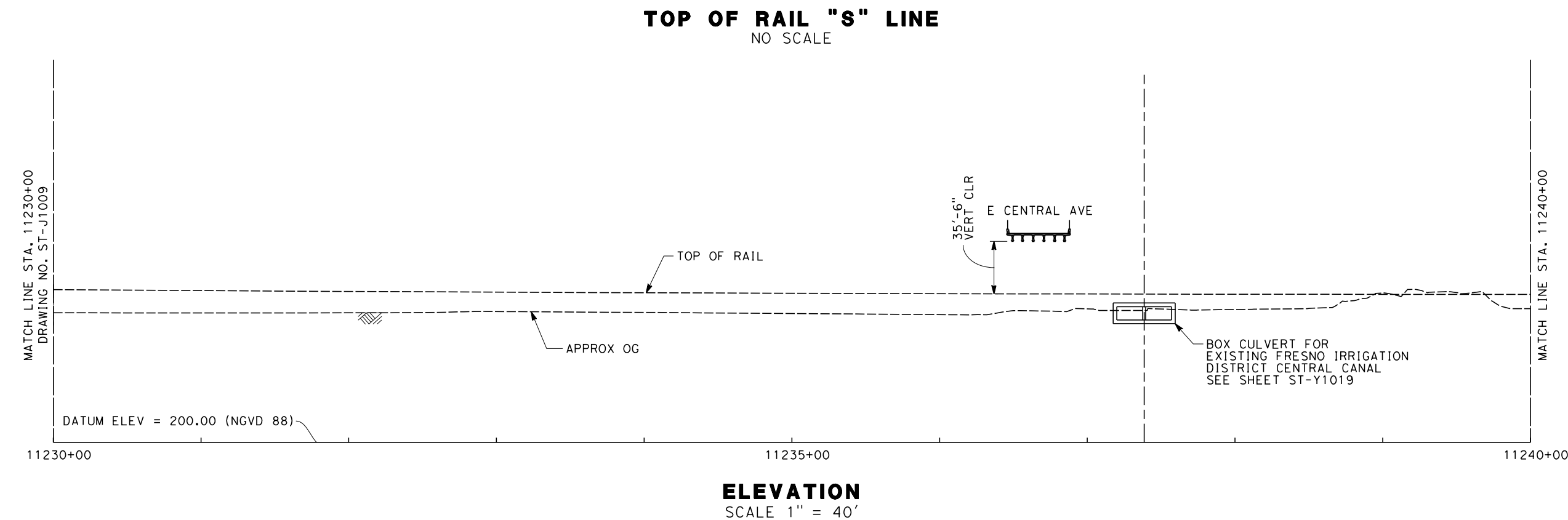
CONTRACT NO.
DRAWING NO. ST-J1009
SCALE AS SHOWN
SHEET NO.



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**NOTES:**  
1. FOR NOTES SEE DRAWING NO. ST-J1001



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. ARMSTRONG

DRAWN BY  
F. PALERMO

CHECKED BY  
O. LIU

IN CHARGE  
R. COFFIN

DATE  
06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
TRACK STRUCTURES  
FRESNO VIADUCT  
PLAN AND ELEVATION

CONTRACT NO.

DRAWING NO.  
ST-J1010

SCALE  
AS SHOWN

SHEET NO.



06/29/2012 ADDENDUM 3 - RFP HSR 11-16

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VOLUME 3 - ROADWAY

DRAWING No	DRAWING DESCRIPTION
GE-A0017	PACKAGE 1C - ROADWAY - INDEX OF DRAWINGS
CV-B0015	PACKAGE 1C - ROADWAY - GENERAL NOTES
CV-B0016	PACKAGE 1C - ROADWAY - GENERAL STRUCTURAL NOTES
CV-B0017	PACKAGE 1C - ROADWAY - INDEX MAP
CV-T1031	PACKAGE 1C - ROADWAY - GRADE SEPARATION LAYOUT - E CHURCH AVE
CV-T1032	PACKAGE 1C - ROADWAY - GRADE SEPARATION PROFILE - E CHURCH AVE
CV-T1033	PACKAGE 1C - ROADWAY - GRADE SEPARATION PROFILE - G ST (E CHURCH AVE)
CV-T1034	PACKAGE 1C - ROADWAY - GRADE SEPARATION PROFILE - OLD E CHURCH AVE
CV-T1035	PACKAGE 1C - ROADWAY - GRADE SEPARATION PROFILE - S GOLDEN STATE BLVD
CV-T1036	PACKAGE 1C - ROADWAY - GRADE SEPARATION LAYOUT - E CENTRAL AVE
CV-T1037	PACKAGE 1C - ROADWAY - GRADE SEPARATION PROFILE - E CENTRAL AVE
CV-T1038	PACKAGE 1C - ROADWAY - GRADE SEPARATION PROFILE - E CEDAR AVE (E CENTRAL AVE)
CV-T1039	PACKAGE 1C - ROADWAY - GRADE SEPARATION LAYOUT - E AMERICAN AVE
CV-T1040	PACKAGE 1C - ROADWAY - GRADE SEPARATION PROFILE - E AMERICAN AVE
CV-T3012	PACKAGE 1C - ROADWAY - GRADE SEPARATION - TYPICAL SECTIONS
CV-T3013	PACKAGE 1C - ROADWAY - GRADE SEPARATION - TYPICAL SECTIONS
CV-T5005	PACKAGE 1C - ROADWAY CLOSURE DETAILS - S CHERRY AVE THROUGH E FLORENCE AVE
CV-T5006	PACKAGE 1C - ROADWAY CLOSURE DETAILS - S RAILROAD AVE
CV-T5007	PACKAGE 1C - ROADWAY CLOSURE DETAILS - S RAILROAD AVE
CV-T5008	PACKAGE 1C - ROADWAY CLOSURE DETAILS - E HARDY AVE
CV-T5009	PACKAGE 1C - ROADWAY CLOSURE DETAILS - E MALAGA AVE
ST-K1045	PACKAGE 1C - ROADWAY - DRAFT GENERAL PLAN - E CHURCH AVE - SHEET 1 OF 2
ST-K1046	PACKAGE 1C - ROADWAY - DRAFT GENERAL PLAN - E CHURCH AVE - SHEET 2 OF 2
ST-K1047	PACKAGE 1C - ROADWAY - DRAFT GENERAL PLAN - E CENTRAL AVE
ST-K1048	PACKAGE 1C - ROADWAY - DRAFT GENERAL PLAN - E AMERICAN AVE

ADDENDUM 3 - RFP HSR 11-16

						DESIGNED BY M. BAMB	<div>PROPOSED PRELIMINARY DESIGN</div> <div>NOT FOR CONSTRUCTION</div>			<div>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</div> <div>PACKAGE 1C ROADWAY INDEX OF DRAWINGS</div>	CONTRACT NO.
						DRAWN BY J. BORGHESI					DRAWING NO. GE-A0017
						CHECKED BY J. MONG					SCALE NO SCALE
						IN CHARGE R. COFFIN					SHEET NO.
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 06/06/12					

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CIVIL GENERAL NOTES

A. CONTROL SURVEY AND MAPPING:

- 1. DESIGN WAS PREPARED USING TOPOGRAPHIC MAPPING OBTAINED FOR THE PURPOSE OF PRELIMINARY DESIGN IN ACCORDANCE WITH TECHNICAL MEMORANDUM 1.1.4 "ENGINEERING SURVEY AND MAPPING."
- 2. NAD 83 (NSRS2007), (1991.35) CALIFORNIA COORDINATE SYSTEM DATUM SHALL BE USED AS HORIZONTAL COORDINATE VALUES.
- 3. NAVD 88 VERTICAL DATUM SHALL TO BE USED AS VERTICAL DATUM.
- 4. MAPPING SHALL BE BASED ON CALIFORNIA COORDINATE SYSTEM (CCS 83) IN US CUSTOMARY UNITS.
- 5. NETWORK OF CONTROL SURVEY MONUMENTS WAS ESTABLISHED AT TWO MILE INTERVALS ALONG THE CHSTP ALIGNMENT. THESE CONTROL MONUMENTS SHALL BE USED IN FUTURE SURVEYS TO ENSURE THAT SURVEY ACTIVITIES ARE BASED ON THE SAME ADJUSTMENT POSITIONS AND EPOCH THAT TRANSITIONS BETWEEN ZONES OF THE CALIFORNIA COORDINATE SYSTEM ARE UNIFORM AND CORRECT.

B. GENERAL SITE NOTES

- 1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE. CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND BECOMING FAMILIAR WITH THE SITE CONDITIONS PRIOR TO BIDDING.
- 2. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH LOCAL AND STATE JURISDICTION INSPECTOR(S). CONTRACTOR SHALL NOTIFY LOCAL AND STATE JURISDICTION INSPECTOR(S) ----- DAYS PRIOR TO THE START OF ANY CONSTRUCTION.
- 3. ALL DAMAGE CAUSED BY THE CONTRACTOR AND/OR SUB-CONTRACTOR SHALL BE RESTORED TO AN "AS GOOD OR BETTER" CONDITION.
- 4. UPON COMPLETION, THE CONTRACTOR SHALL LEAVE THE PROJECT AREA FREE OF DEBRIS AND UNUSED MATERIAL.
- 5. FOR STANDARD GENERAL ABBREVIATIONS, SEE DRAWINGS SD-GE-001 THRU SD-GE-004.
- 6. FOR STANDARD GENERAL SYMBOLS, SEE DRAWINGS SD-GE-005 THRU SD-GE-007.
- 7. "ORIGINAL GROUND" SHOWN ON CROSS SECTIONS REFERS TO THE APPROXIMATE EXISTING GROUND LINE AT THE DESIGNATED CENTERLINE, BASELINE, LAYOUT LINE OR SECTION LINE.
- 8. THE CONTRACTOR SHALL MAINTAIN EXISTING SITE SURVEY CONTROL POINTS AND BENCH MARKS. SURVEY CONTROL POINTS OR BENCH MARKS DAMAGED OR REMOVED BY THE CONTRACTOR SHALL BE RESTORED BY A REGISTERED LAND SURVEYOR.
- 9. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL CODES AND ORDINANCES IN EFFECT. CONTRACTOR SHALL PROVIDE AND MAINTAIN PROPER BARRICADES, RAILINGS, GUARDS, FLAGGING, LIGHTING, OR OTHER DEVICES NECESSARY FOR THE PROTECTION OF LIFE AND PROPERTY.

- 10. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING MATERIALS.
- 11. ALL HORIZONTAL AND VERTICAL DISTANCES ARE IN FEET AND /OR DECIMALS OF FOOT EXCEPT AS NOTED OTHERWISE.
- 12. ACCESS ROAD TYPE SHALL BE CONFIRMED ON A SITE-BY-SITE BASIS.
- 13. REFER TO RIGHT-OF-WAY APPRAISAL MAPS FOR LIMITS OF RIGHT-OF-WAY AND TEMPORARY CONSTRUCTION EASEMENTS.
- 14. AT NOTED ACCESS EASEMENTS, THE CONTRACTOR SHALL PROVIDE AN ACCESS ROAD BETWEEN THE FACILITY AND THE PUBLIC ROAD.

C. DEMOLITION NOTES

- 1. CONTRACTOR MUST REVIEW ALL ENVIRONMENTAL STUDIES AND REQUIREMENTS PRIOR TO BIDDING.
- 2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TEMPORARY ACCESS DURING CONSTRUCTION. UTILITY OUTAGE AND ACCESS CLOSURES DURING CONSTRUCTION REQUIRE A MINIMUM OF ----- DAYS NOTICE TO OWNER OR SITE TENANTS.
- 3. CONTRACTOR SHALL FOLLOW LOCAL JURISDICTION REQUIREMENTS FOR CLEARING AND GRUBBING.

D. GRADING

- 1. NO CONTRACTOR SHALL PERFORM ANY GRADING OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATION OCCUR THE CONTRACTOR MAY BE CITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY.
- 2. THE CONTRACTOR SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE.
- 3. PROVISIONS SHALL BE MADE TO PREVENT SURFACE WATERS FROM DAMAGING THE CUT FACE OF AN EXCAVATION OR THE SLOPED SURFACES OF A FILL. FURTHERMORE, PROVISIONS SHALL BE MADE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE SITE.
- 4. ALL SLOPED AND EXPOSED AREAS SHALL BE SODDED OR PLANTED AS SOON AS FINAL GRADES HAVE BEEN ESTABLISHED. PLANTING SHALL NOT BE DELAYED UNTIL ALL GRADING WORK HAS BEEN COMPLETED. GRADING TO FINAL GRADE SHALL BE CONTINUOUS, AND ANY AREA WITHIN WHICH WORK HAS BEEN INTERRUPTED OR DELAYED SHALL BE PLANTED.
- 5. THE LIMITS OF THE AREA TO BE GRADED SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE GRADING WORK.
- 6. ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS CONTAINED IN THE LATEST CALTRANS STORM WATER QUALITY HANDBOOKS.

E. TEMPORARY TRAFFIC CONTROL

- 1. CONTRACTOR SHALL OBTAIN APPROVAL FOR TRAFFIC CONTROL PLAN FROM AGENCY HAVING JURISDICTION OVER THE ROADWAY PRIOR TO IMPLEMENTATION OF TEMPORARY TRAFFIC CONTROL.

F. PUBLIC HEATH, SAFETY, AND CONVENIENCE NOTES

- 1. CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH, SAFETY, AND ENVIRONMENTAL QUALITY.
- 2. CONTRACTOR SHALL APPLY FOR A CONSTRUCTION PERMIT WITH A NOISE POLLUTION CONTROL PLAN.

G. STOCKPILING NOTES

- 1. IF THE STOCKPILING WORK INVOLVES CONTAMINATED SOIL, THEN ALL STOCKPILING WORK SHALL BE DONE IN CONFORMANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS.

H. GRUBBING AND CLEARING NOTES

- 1. WHERE APPLICABLE AND FEASIBLE THE MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY GRUBBING WORK IS INITIATED.

ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. BAMB
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE S. BURGESS
DATE 06/06/12

PROPOSED  
PRELIMINARY  
DESIGN

NOT FOR  
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION

PACKAGE 1C  
ROADWAY  
GENERAL NOTES

CONTRACT NO.
DRAWING NO. CV-B0015
SCALE AS SHOWN
SHEET NO.

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GENERAL NOTES  
LOAD AND RESISTANCE FACTOR DESIGN

DESIGN: HIGH SPEED RAIL DESIGN CRITERIA,  
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS  
4th EDITION AND CALTRANS AMENDMENTS

STANDARD SPECIFICATIONS: HIGH SPEED RAIL SPECIFICATIONS,  
CALTRANS STANDARD SPECIFICATIONS  
DATED 2010

SEISMIC DESIGN: HIGH SPEED RAIL DESIGN CRITERIA,  
CALTRANS SEISMIC DESIGN CRITERIA (SDC)  
VERSION 1.6, NOVEMBER 2010

DEAD LOAD: INCLUDES 35 PSF FOR FUTURE WEARING SURFACE

LIVE LOADING: HL93 AND PERMIT DESIGN LOAD

WIND LOAD: 100 MPH WIND VELOCITY

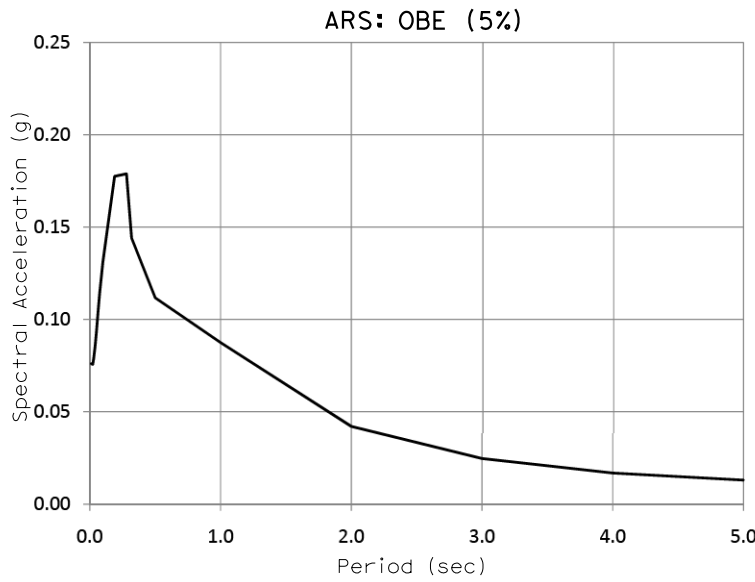
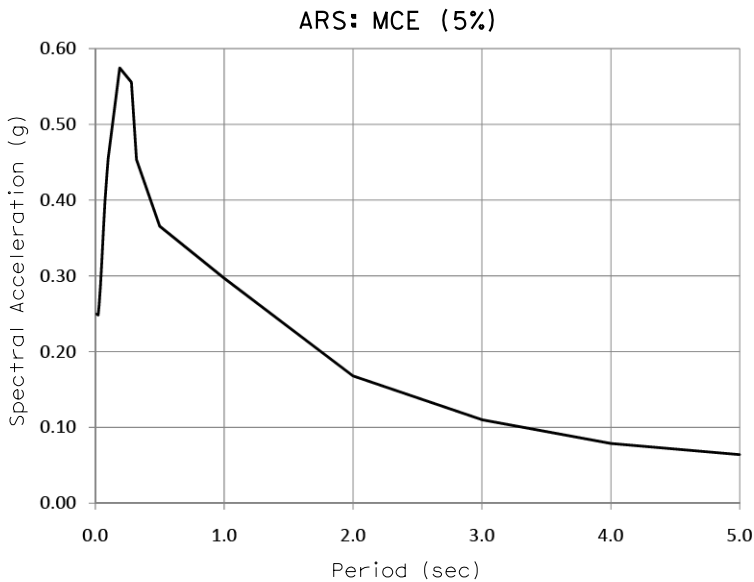
REINFORCED CONCRETE:  $f_y = 60$  ksi  
 $f'_c =$  SEE CONCRETE STRENGTH AND TYPE LIMITS

PRESTRESSED CONCRETE: LOW RELAXATION STRANDS  
 $f_{py} = 243$  ksi  
 $f_{pu} = 270$  ksi  
 $f'_{ci} = 5$  ksi AT TIME OF RELEASE  
 $f'_c = 7$  ksi AT 28 DAYS

PILES: CLASS 200 PILES

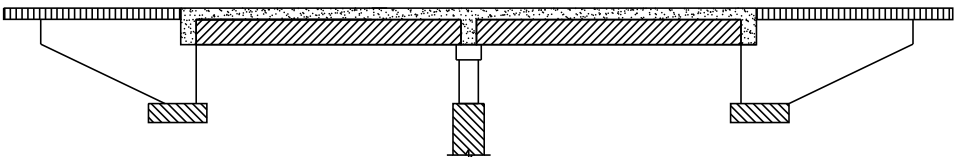


CLASS 140 PILES  
CLASS 90 PILES



GENERAL  
STRUCTURAL NOTES

1. PILE/SHAFT LENGTHS TO BE DETERMINED
2. EMBEDDED ITEMS REQUIRED FOR UTILITY INSTALLATIONS ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS. CONTRACTOR SHALL REFER TO THE UTILITY DRAWINGS FOR THE LOCATIONS AND DETAILS OF THESE ITEMS.
3. MSE WALL REINFORCEMENT AND PANEL TO BE DETERMINED
4. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER DRAWINGS RELATED TO THE WORK.
5. ALL SPANS ARE DESIGNED CONTINUOUS FOR LIVE LOAD.



- STRUCTURAL CONCRETE, BRIDGE  
 $f'_c = 5$  ksi AT 28 DAYS
- STRUCTURAL CONCRETE, APPROACH SLAB  
 $f'_c = 4$  ksi AT 28 DAYS
- STRUCTURAL CONCRETE, SUPERSTRUCTURE  
 $f'_c = 5$  ksi AT 28 DAYS
- STRUCTURAL CONCRETE, BRIDGE FOOTING  
 $f'_c = 4$  ksi AT 28 DAYS
- PRECAST PRESTRESSED GIRDER  
 $f'_c =$  SEE PRESTRESSED CONCRETE

CONCRETE STRENGTH AND TYPE LIMITS  
NO SCALE

ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S.T. MAK
DRAWN BY E. SUDHAUSEN
CHECKED BY A. ARMSTRONG
IN CHARGE S. BURGESS
DATE 06/06/12

PROPOSED  
PRELIMINARY  
DESIGN

NOT FOR  
CONSTRUCTION



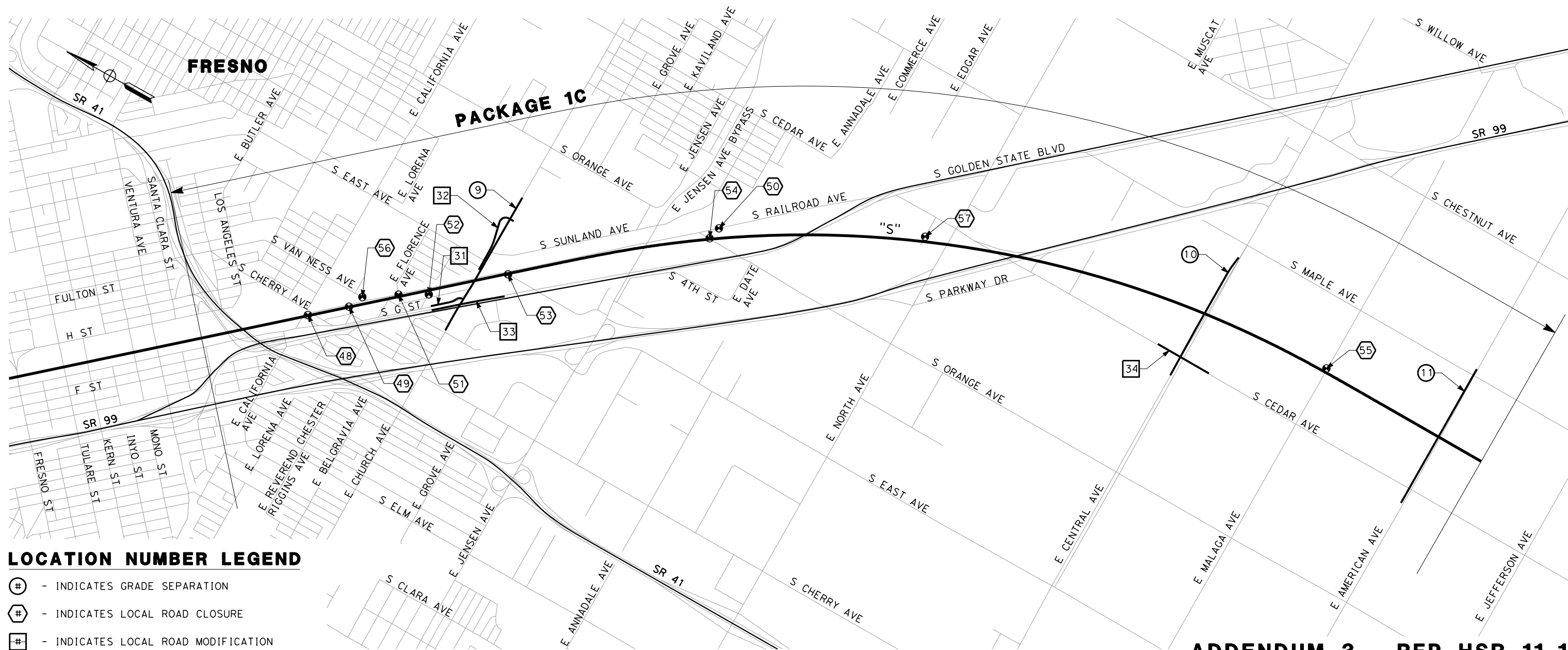
CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
ROADWAY  
GENERAL STRUCTURAL NOTES

CONTRACT NO.
DRAWING NO. CV-B0016
SCALE AS SHOWN
SHEET NO.



LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STRUCTURE DWG NO.
⑨	GRADE SEPARATION - E CHURCH AVE	CV-T1031 & CV-T1032	
⑩	GRADE SEPARATION - E CENTRAL AVE	CV-T1036 & CV-T1037	
⑪	GRADE SEPARATION - E AMERICAN AVE	CV-T1039 & CV-T1040	
31	LOCAL ROAD - G ST (E CHURCH AVE)	CV-T1031 & CV-T1033	
32	LOCAL ROAD - OLD E CHURCH AVE	CV-T1031 & CV-T1034	
33	LOCAL ROAD - S GOLDEN STATE BLVD	CV-T1031 & CV-T1035	
34	LOCAL ROAD - S CEDAR AVE (E CENTRAL AVE)	CV-T1036 & CV-T1038	
48	ROAD CLOSURE - E CALIFORNIA AVE & S CHERRY AVE	CV-T5005	

LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STRUCTURE DWG NO.
49	ROAD CLOSURE - E LORENA AVE	CV-T5005	
50	ROAD CLOSURE - S RAILROAD AVE	CV-T5007	
51	ROAD CLOSURE - E FLORENCE AVE & S SARAH ST	CV-T5005	
52	ROAD CLOSURE - E BELGRAVIA AVE	CV-T1031	
53	ROAD CLOSURE - S EAST AVE	CV-T1031	
54	ROAD CLOSURE - S ORANGE AVE	CV-T5007	
55	ROAD CLOSURE - E MALAGA AVE	CV-T5009	
56	ROAD CLOSURE - S VAN NESS AVE	CV-T5005	
57	ROAD CLOSURE - E HARDY AVE	CV-T5008	



## ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY	M. Bamm
DRAWN BY	E. SUDHAUSEN
CHECKED BY	S. BURGESS
IN CHARGE	R. COFFIN
DATE	06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



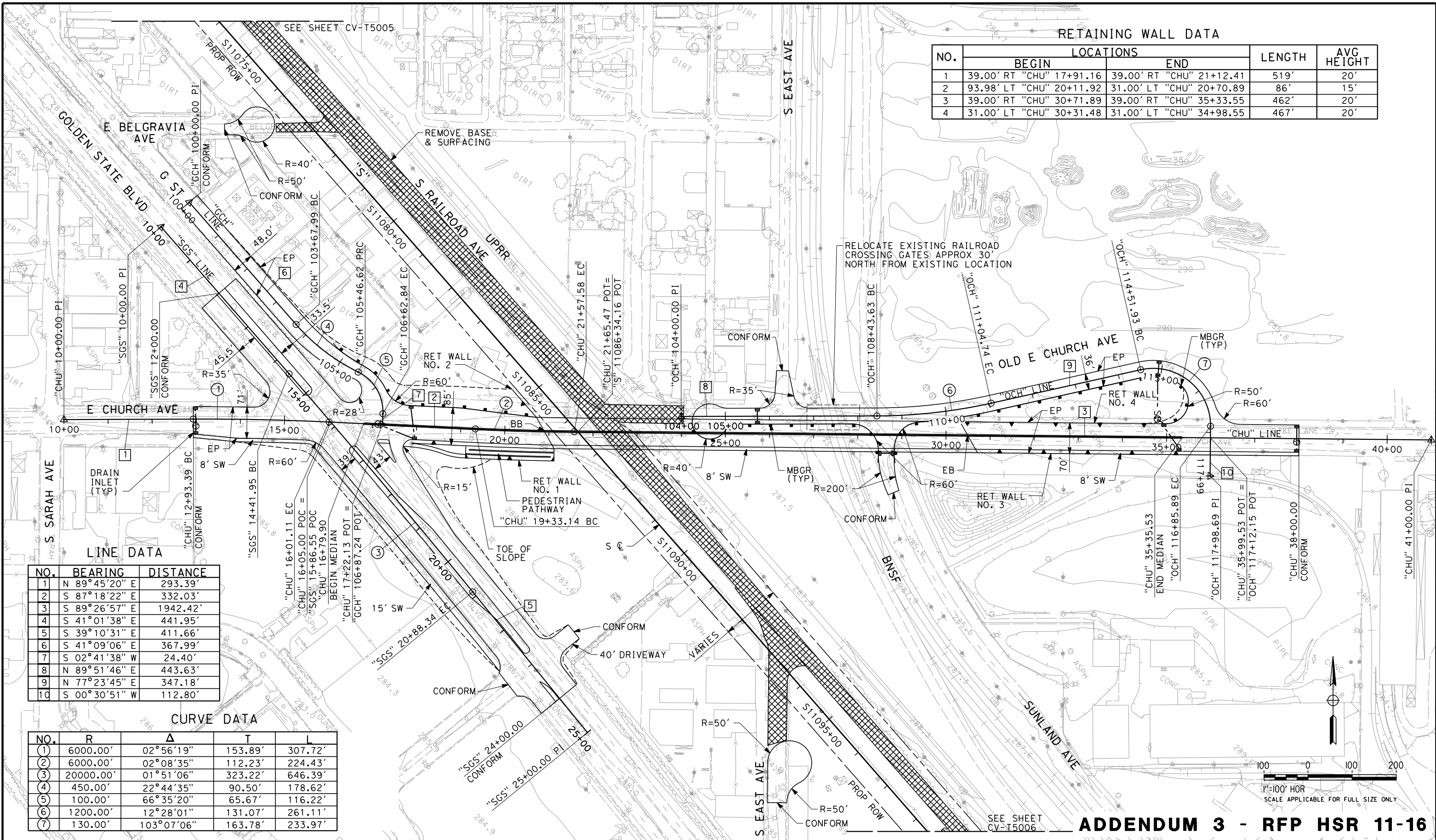
**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
ROADWAY  
INDEX MAP

CONTRACT NO.
DRAWING NO. CV-B0017
SCALE NO SCALE
SHEET NO.



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NO.	LOCATIONS		LENGTH	AVG HEIGHT
	BEGIN	END		
1	39.00' RT "CHU" 17+91.16	39.00' RT "CHU" 21+12.41	519'	20'
2	93.98' LT "CHU" 20+11.92	31.00' LT "CHU" 20+70.89	86'	15'
3	39.00' RT "CHU" 30+71.89	39.00' RT "CHU" 35+33.55	462'	20'
4	31.00' LT "CHU" 30+31.48	31.00' LT "CHU" 34+98.55	467'	20'

LINE DATA		
NO.	BEARING	DISTANCE
1	N 89°45'20" E	293.39'
2	S 87°18'22" E	332.03'
3	S 89°26'57" E	1942.42'
4	S 41°01'38" E	441.95'
5	S 39°10'31" E	411.66'
6	S 41°09'06" E	367.99'
7	S 02°41'38" W	24.40'
8	N 89°51'46" E	443.63'
9	N 77°23'45" E	347.18'
10	S 00°30'51" W	112.80'

CURVE DATA				
NO.	R	Δ	T	L
①	6000.00'	02°56'19"	153.89'	307.72'
②	6000.00'	02°08'35"	112.23'	224.43'
③	20000.00'	01°51'06"	323.22'	646.39'
④	450.00'	22°44'35"	90.50'	178.62'
⑤	100.00'	66°35'20"	65.67'	116.22'
⑥	1200.00'	12°28'01"	131.07'	261.11'
⑦	130.00'	103°07'06"	163.78'	233.97'

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. BAMB
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BURGESS
IN CHARGE R. COFFIN
DATE 06/06/12

PROPOSED PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

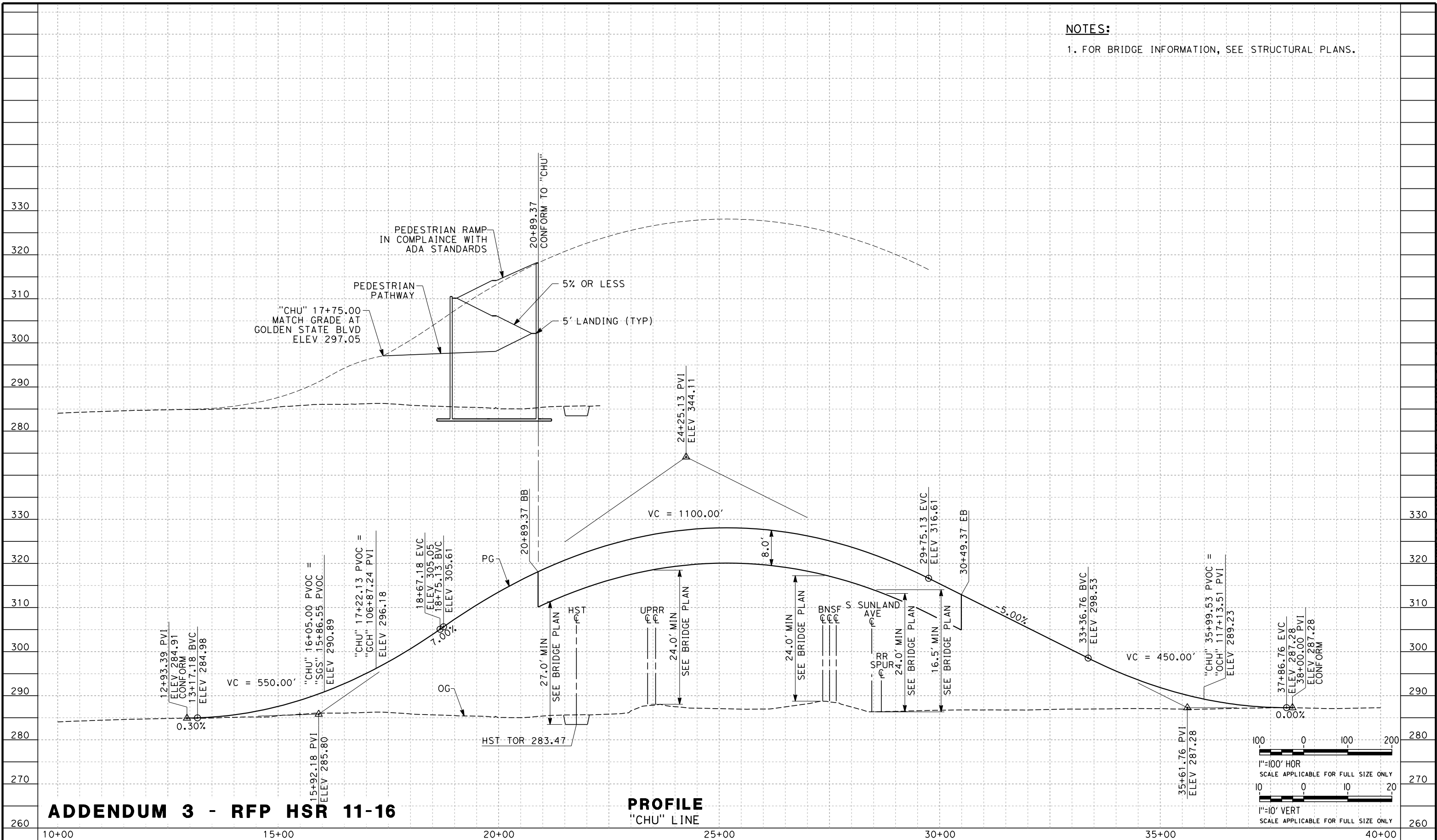




CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION PACKAGE 1C ROADWAY GRADE SEPARATION LAYOUT E CHURCH AVE
---

CONTRACT NO.
DRAWING NO. CV-T1031
SCALE AS SHOWN
SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16

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					DESIGNED BY M. BAMB	<b>PROPOSED PRELIMINARY DESIGN</b>			<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b> PACKAGE 1C ROADWAY GRADE SEPARATION PROFILE E CHURCH AVE	CONTRACT NO.
					DRAWING NO. CV-T1032					
					SCALE AS SHOWN					
					SHEET NO.					
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 06/06/12				

06/29/2012 ADDENDUM 3 - RFP HSR 11-16



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ADDENDUM 3 - RFP HSR 11-16

DESIGNED BY	M. BAMB
DRAWN BY	E. SUDHAUSEN
CHECKED BY	S. BURGESS
IN CHARGE	R. COFFIN
DATE	06/06/12

PROPOSED  
PRELIMINARY  
DESIGN

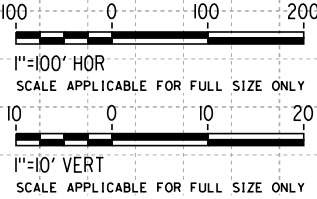
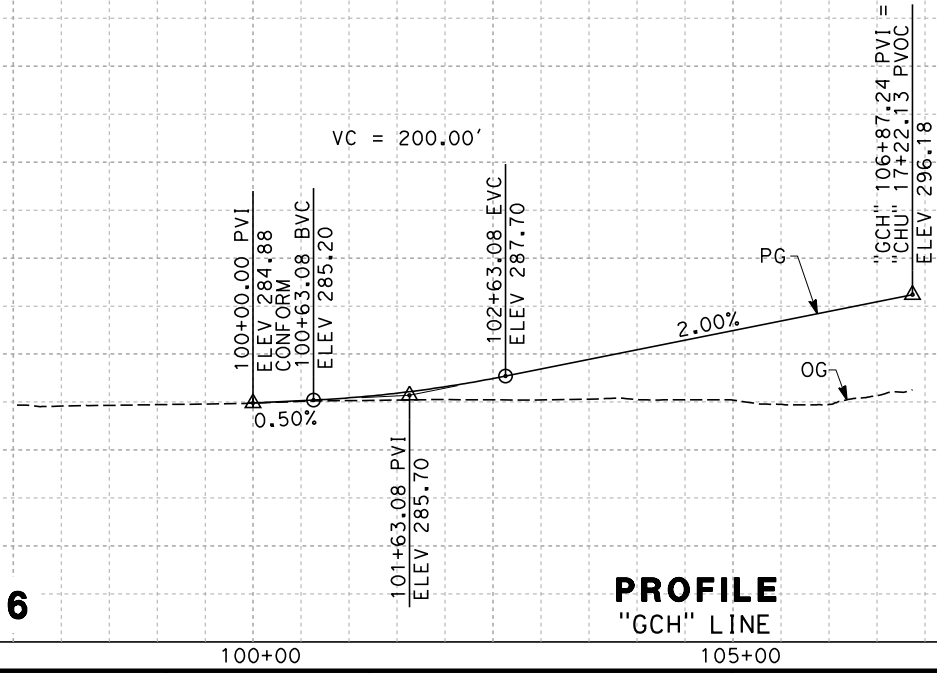
NOT FOR  
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
ROADWAY  
GRADE SEPARATION PROFILE  
G ST (E CHURCH AVE)

CONTRACT NO.
DRAWING NO. CV-T1033
SCALE AS SHOWN
SHEET NO.

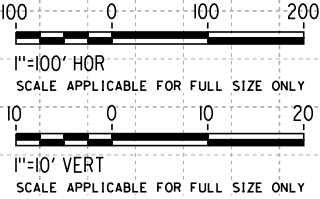
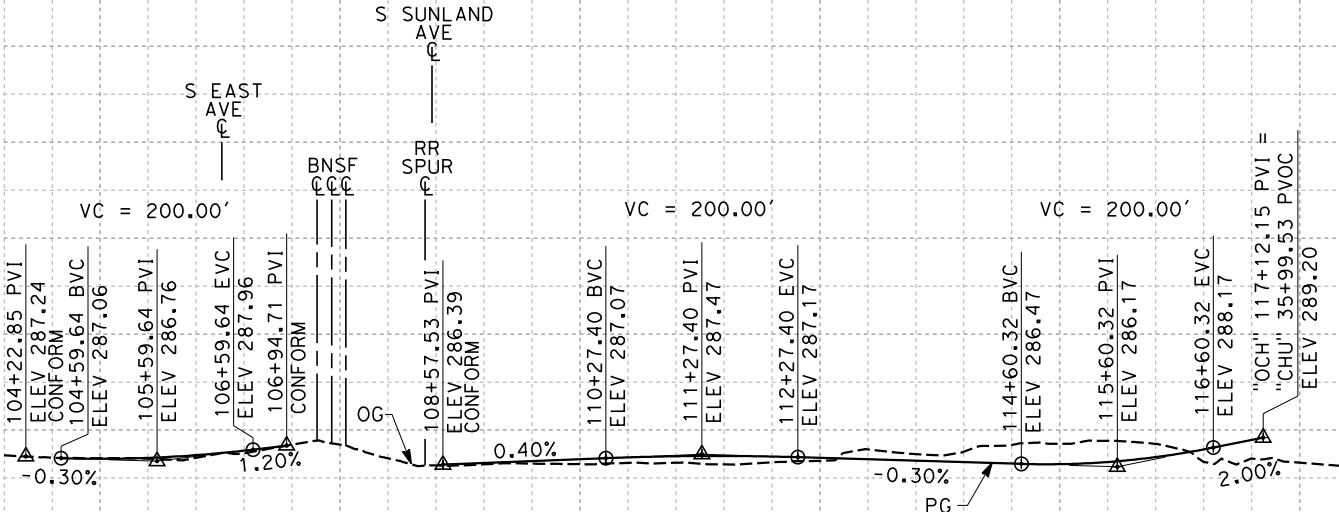
NOTES:  
1. FOR BRIDGE INFORMATION, SEE STRUCTURAL PLANS.



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ADDENDUM 3 - RFP HSR 11-16

PROFILE  
"OCH" LINE



- NOTES:
1. FOR BRIDGE INFORMATION, SEE STRUCTURAL PLANS.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. BAMB
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BURGESS
IN CHARGE R. COFFIN
DATE 06/06/12

PROPOSED  
PRELIMINARY  
DESIGN

NOT FOR  
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
ROADWAY  
GRADE SEPARATION PROFILE  
OLD E CHURCH AVE

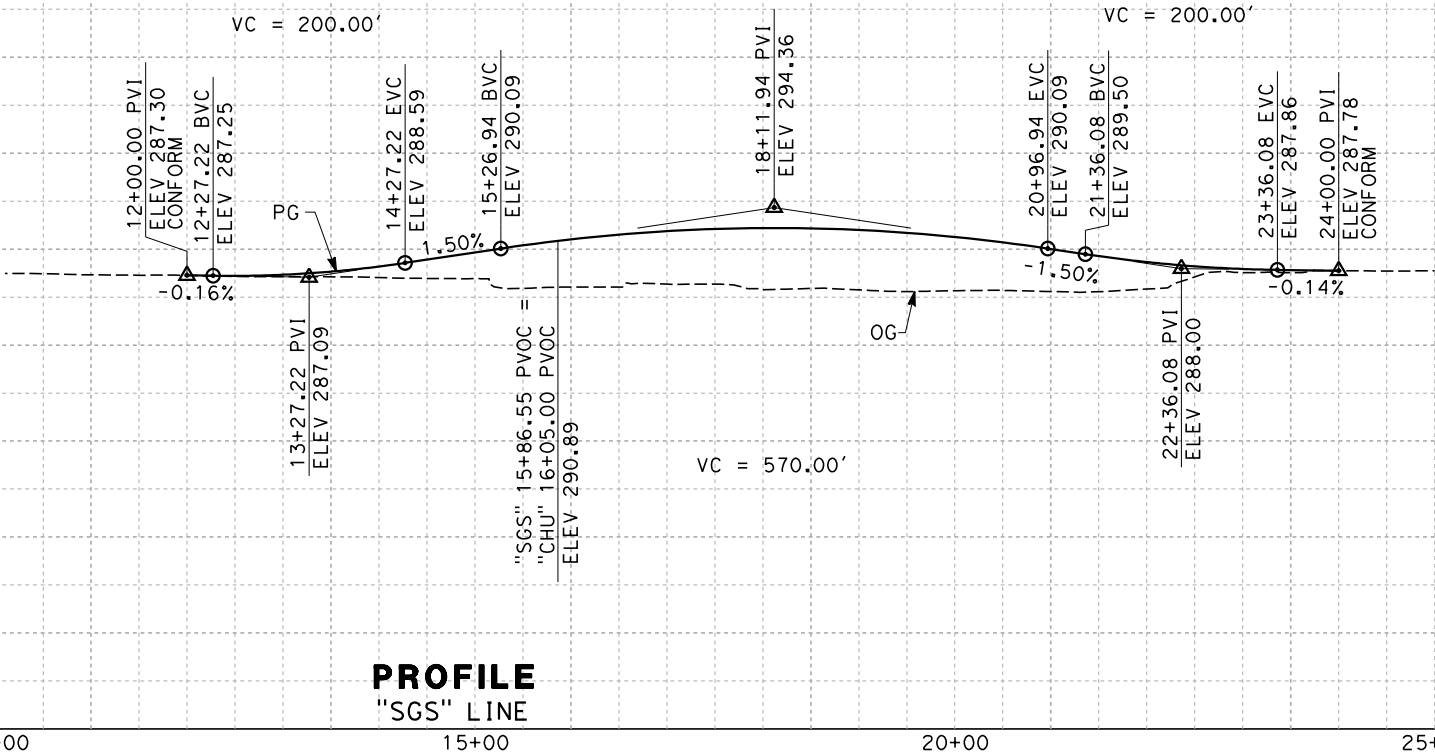
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SCALE AS SHOWN
SHEET NO.



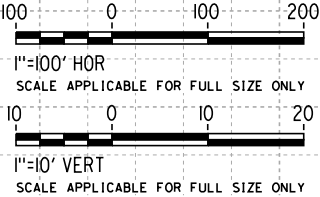
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ADDENDUM 3 - RFP HSR 11-16

PROFILE  
"SGS" LINE



NOTES:  
1. FOR BRIDGE INFORMATION, SEE STRUCTURAL PLANS.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. BAMB
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BURGESS
IN CHARGE R. COFFIN
DATE 06/06/12

PROPOSED  
PRELIMINARY  
DESIGN  
  
NOT FOR  
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
ROADWAY  
GRADE SEPARATION PROFILE  
S GOLDEN STATE BLVD

CONTRACT NO.
DRAWING NO. CV-T1035
SCALE AS SHOWN
SHEET NO.

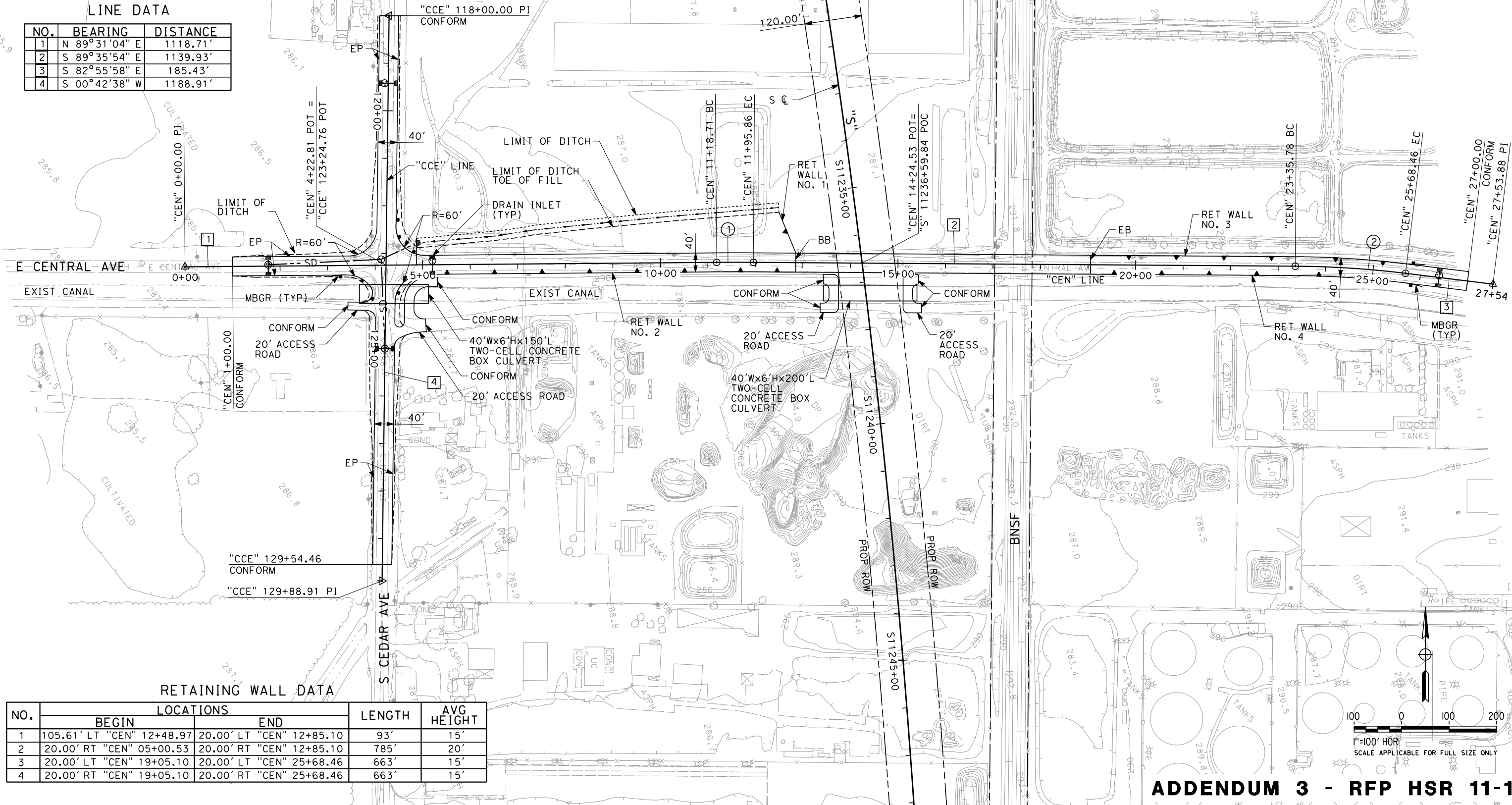
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CURVE DATA

NO.	R	Δ	T	L
①	5000.00'	00°53'02"	38.57'	77.15'
②	2000.00'	06°39'56"	116.47'	232.67'

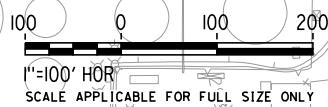
LINE DATA

NO.	BEARING	DISTANCE
1	N 89°31'04" E	1118.71'
2	S 89°35'54" E	1139.93'
3	S 82°55'58" E	185.43'
4	S 00°42'38" W	1188.91'



RETAINING WALL DATA

NO.	LOCATIONS		LENGTH	AVG HEIGHT
	BEGIN	END		
1	105.61' LT "CEN" 12+48.97	20.00' LT "CEN" 12+85.10	93'	15'
2	20.00' RT "CEN" 05+00.53	20.00' RT "CEN" 12+85.10	785'	20'
3	20.00' LT "CEN" 19+05.10	20.00' LT "CEN" 25+68.46	663'	15'
4	20.00' RT "CEN" 19+05.10	20.00' RT "CEN" 25+68.46	663'	15'



ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. BAMB
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



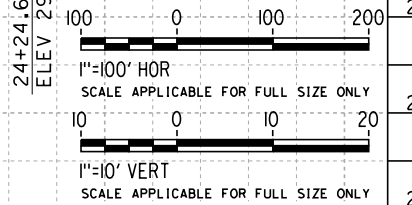
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
ROADWAY  
GRADE SEPARATION LAYOUT  
E CENTRAL AVE

CONTRACT NO.
DRAWING NO. CV-T1036
SCALE AS SHOWN
SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16

1. FOR BRIDGE INFORMATION, SEE STRUCTURAL PLANS.



**PROFILE**  
"CEN" LINE

REV	DATE	BY	CHK	APP	DESCRIPTION
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DATE 06/06/12

**NOT FOR  
CONSTRUCTION**



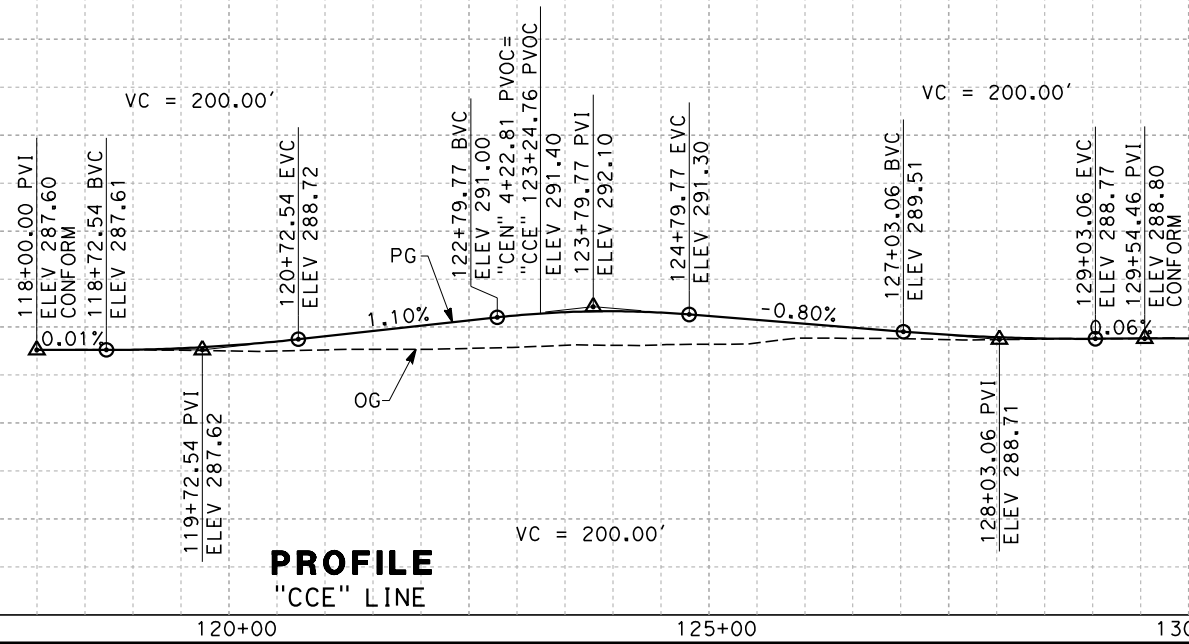
PACKAGE 1C  
ROADWAY  
GRADE SEPARATION PROFILE  
E CENTRAL AVE

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## ADDENDUM 3 - RFP HSR 11-16

NOTES:

1. FOR BRIDGE INFORMATION, SEE STRUCTURAL PLANS.



100 0 100 200  
1"=100' HOR  
SCALE APPLICABLE FOR FULL SIZE ONLY

10 0 10 20  
1"=10' VERT  
SCALE APPLICABLE FOR FULL SIZE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY	M. BAMM
DRAWN BY	E. SUDHAUSEN
CHECKED BY	S. BURGESS
IN CHARGE	R. COFFIN
DATE	06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**SIERRA SUBDIVISION**  
PACKAGE 1C  
ROADWAY  
GRADE SEPARATION PROFILE  
S CEDAR AVE (E CENTRAL AVE)

CONTRACT NO.

DRAWING NO.  
CV-T1038

SCALE  
AS SHOWN

SHEET NO.



DESIGNED BY M. BAMM
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE R. COFFIN
DATE 06/06/12

URS | HMM | ARUP

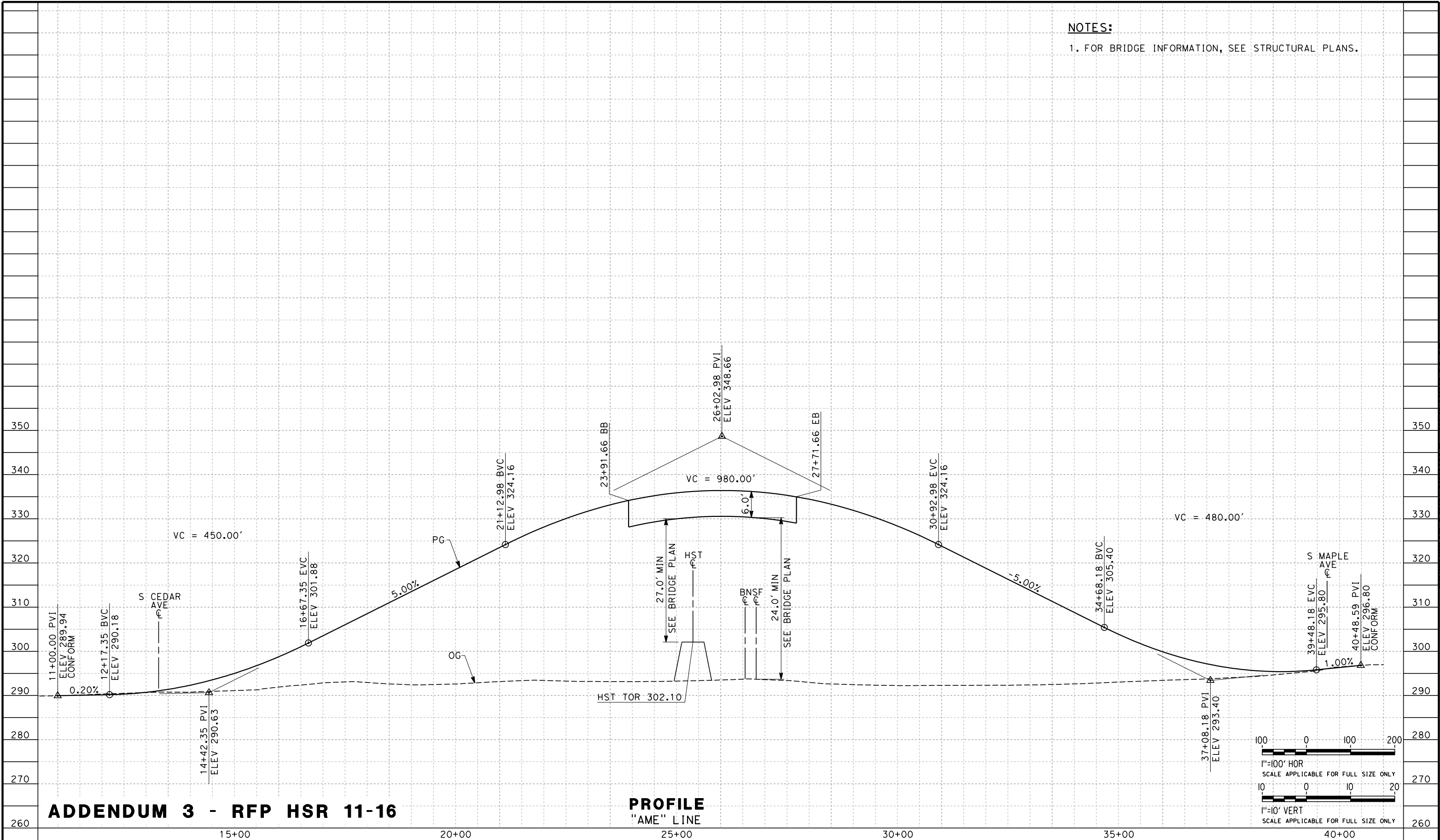
CALIFORNIA HIGH-SPEED TRAIN



CONTRACT NO.
DRAWING NO. CV-T1039
SCALE AS SHOWN
SHEET NO.

**06/29/2012 ADDENDUM 3 - RFP HSR 11-16**

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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. BAMB
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BURGESS
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
ROADWAY  
GRADE SEPARATION PROFILE  
E AMERICAN AVE

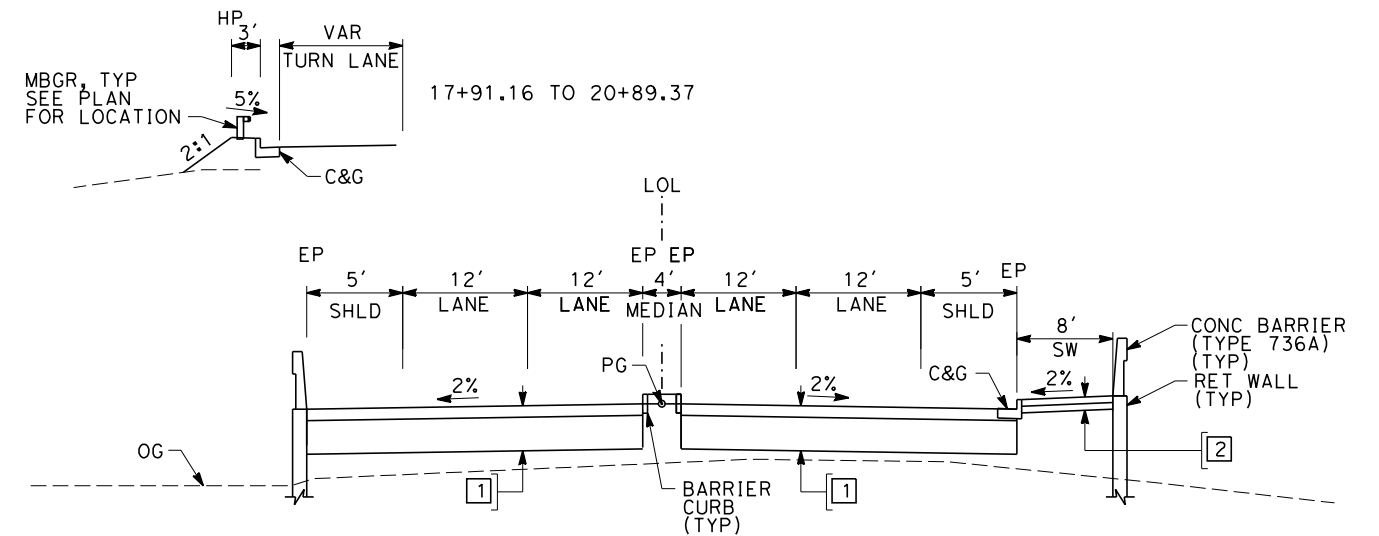
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SHEET NO.

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- |   |  |
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| 2 | <div style="display: inline-block; vertical-align: middle;"> <div style="border-left: 1px solid black; border-bottom: 1px solid black; height: 1.5em; width: 1.5em; margin-right: 5px;"></div> <div style="display: inline-block; vertical-align: middle;"> <div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="width: 100%;"></div> </div> </div> <div style="display: inline-block; vertical-align: middle; margin-left: 5px;">             0.35' PCC<br/>             0.35' CL2 AB           </div>          |

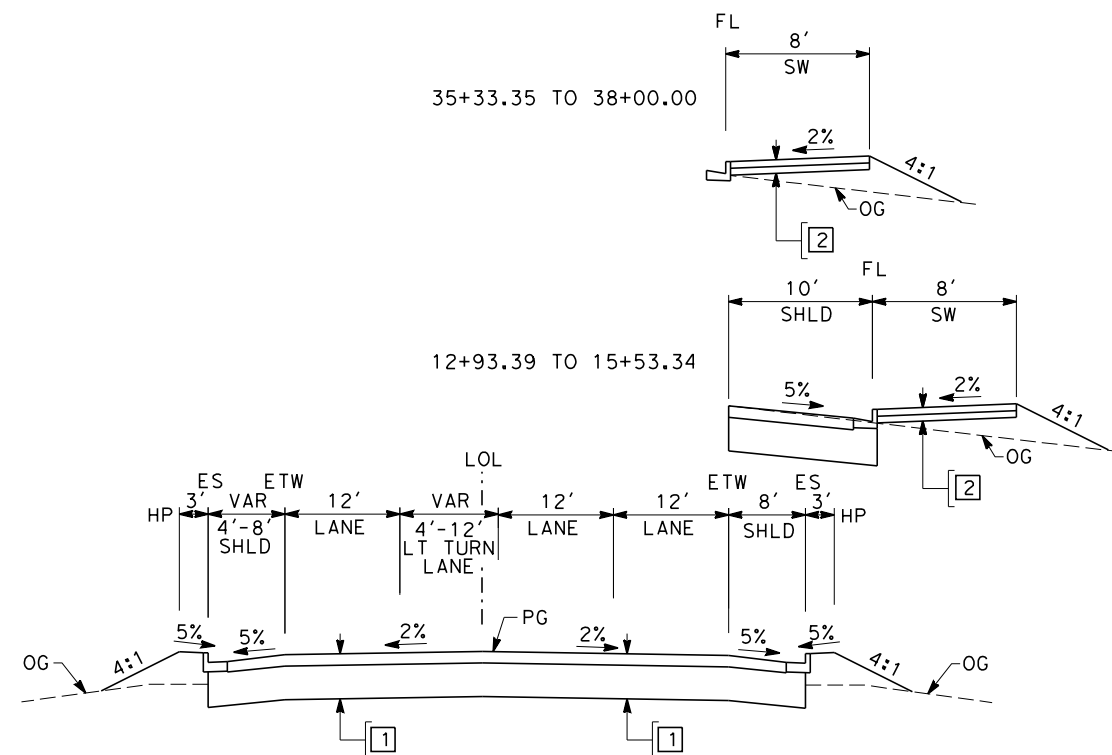
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STREET NAME	ALIGNMENT DESIGNATION	DESIGN SPEED (MPH)
E CHURCH AVE	CHU	40
E CENTRAL AVE	CEN	35
E AMERICAN AVE	AME	45
G ST (E CHURCH AVE)	GCH	25
OLD E CHURCH AVE (E CHURCH AVE)	OCH	25
S GOLDEN STATE BLVD (E CHURCH AVE)	SGS	50
S CEDAR AVE (E CENTRAL AVE)	CCE	45



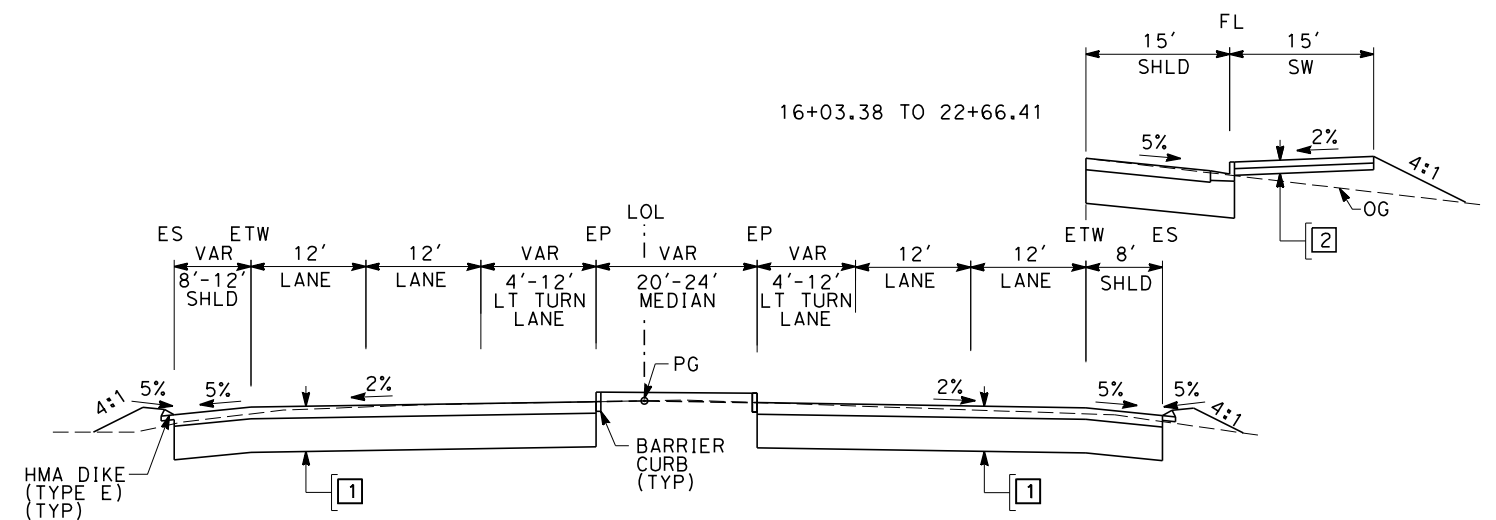
**E CHURCH AVE**

"CHU" 17+91.16 TO 20+89.37  
 "CHU" 30+49.37 TO 33+33.55



**E CHURCH AVE**



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"CHU" 12+93.39 TO 17+91.16
"CHU" 33+33.55 TO 38+00.00
```



**S GOLDEN STATE BLVD**

"SGS" 12+00+00 TO 24+00.00

## ADDENDUM 3 - RFP HSR 11-16

						DESIGNED BY M. BAMB DRAWN BY E. SUDHAUSEN CHECKED BY J. MONG IN CHARGE R. COFFIN DATE 06/06/12	<b>PROPOSED PRELIMINARY DESIGN</b>  <b>NOT FOR CONSTRUCTION</b>	 	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b> PACKAGE 1C ROADWAY ROADWAY / GRADE SEPARATION TYPICAL SECTIONS	CONTRACT NO.  DRAWING NO. CV-T3012 SCALE AS SHOWN SHEET NO.
REV	DATE	BY	CHK	APP	DESCRIPTION					

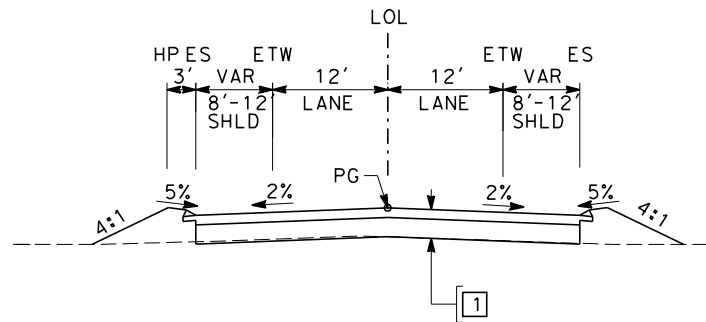
ercon:sudhausen6/5/2012 4:36:06 PM CAHSR-r1.tbl PDF\_half\_black\_200dpi.plt\\global\\americas\\Jobs\\S-F\\131000\\131577\\4 Internal Project Data\\4-03 Drawings\\4-03-03 30% Design\\4-03-03-05 Design Sheets\\Highway

STRUCTURAL SECTION

TYPICAL ROADWAY

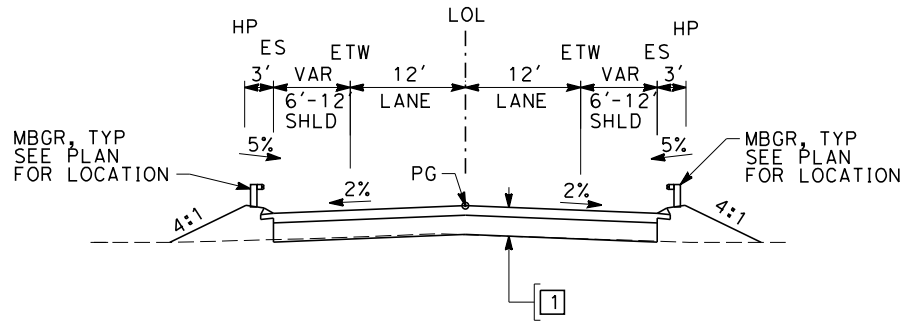
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1.50' CL2 AB

2 0.35' PCC  
0.35' CL2 AB



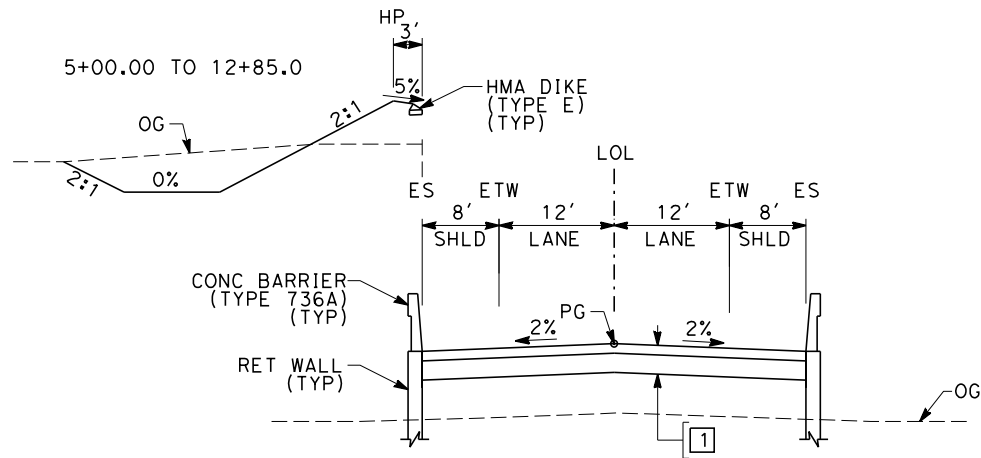
G ST

"GCH" 100+00.00 TO 106+87.24



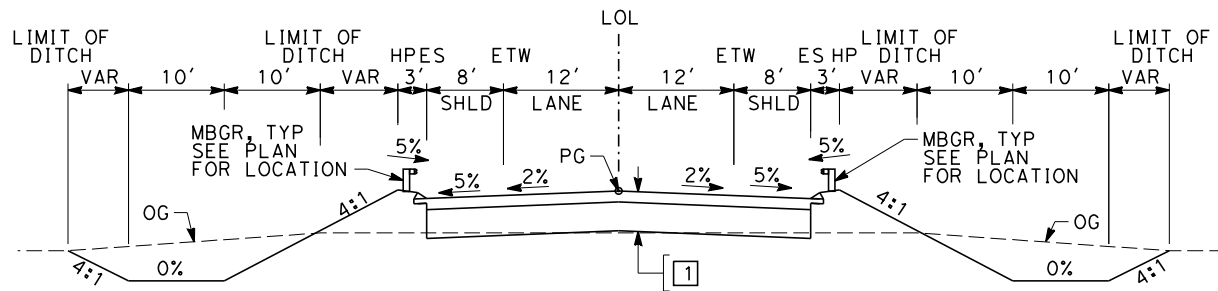
OLD CHURCH AVE, E CENTRAL AVE, S CEDAR AVE

"OCH" 104+21.11 TO 106+94.71  
"OCH" 107+95.45 TO 117+13.51  
"CEN" 1+00.00 TO 5+00.00  
"CEN" 25+68.46 TO 27+00.00  
"CCE" 118+00.00 TO 129+54.46



E CENTRAL AVE

"CEN" 5+00.00 TO 12+85.10  
"CEN" 19+04.95 TO 25+68.46



E AMERICAN AVE

"AME" 11+00.00 TO 23+91.66  
"AME" 27+71.66 TO 40+48.59

ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. BAMB
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BURGESS
IN CHARGE R. COFFIN
DATE 06/06/12

PROPOSED  
PRELIMINARY  
DESIGN  
  
NOT FOR  
CONSTRUCTION

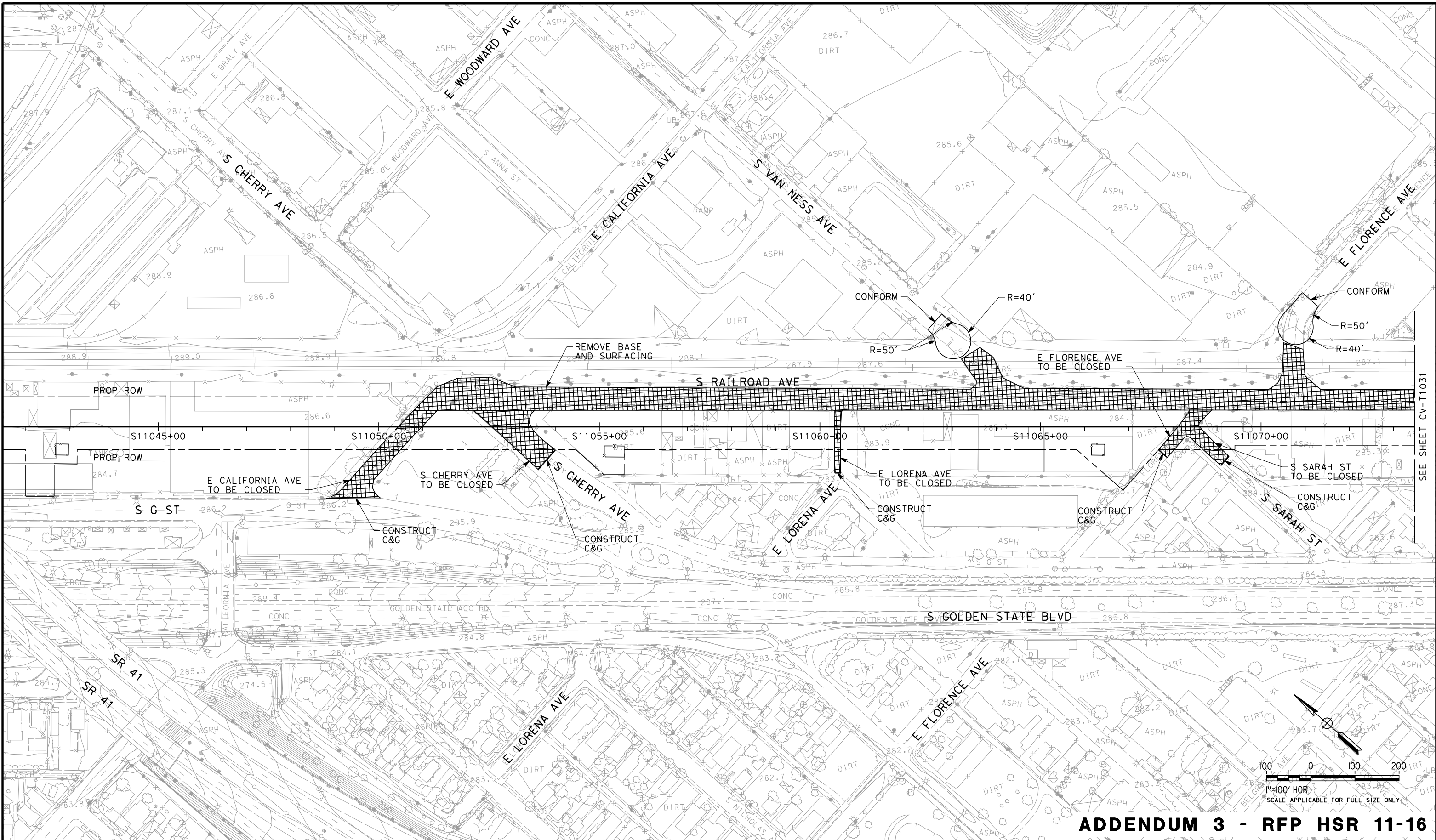


CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
ROADWAY  
ROADWAY / GRADE SEPARATION  
TYPICAL SECTIONS

CONTRACT NO.
DRAWING NO. CV-T3013
SCALE AS SHOWN
SHEET NO.



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06/29/2012 ADDENDUM 3 - RFP HSR 11-16  
SEE SHEET CV-T1031

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
M. BAMB  
DRAWN BY  
E. SUDHAUSEN  
CHECKED BY  
S. BURGESS  
IN CHARGE  
R. COFFIN  
DATE  
06/06/12

PROPOSED  
PRELIMINARY  
DESIGN  
  
NOT FOR  
CONSTRUCTION

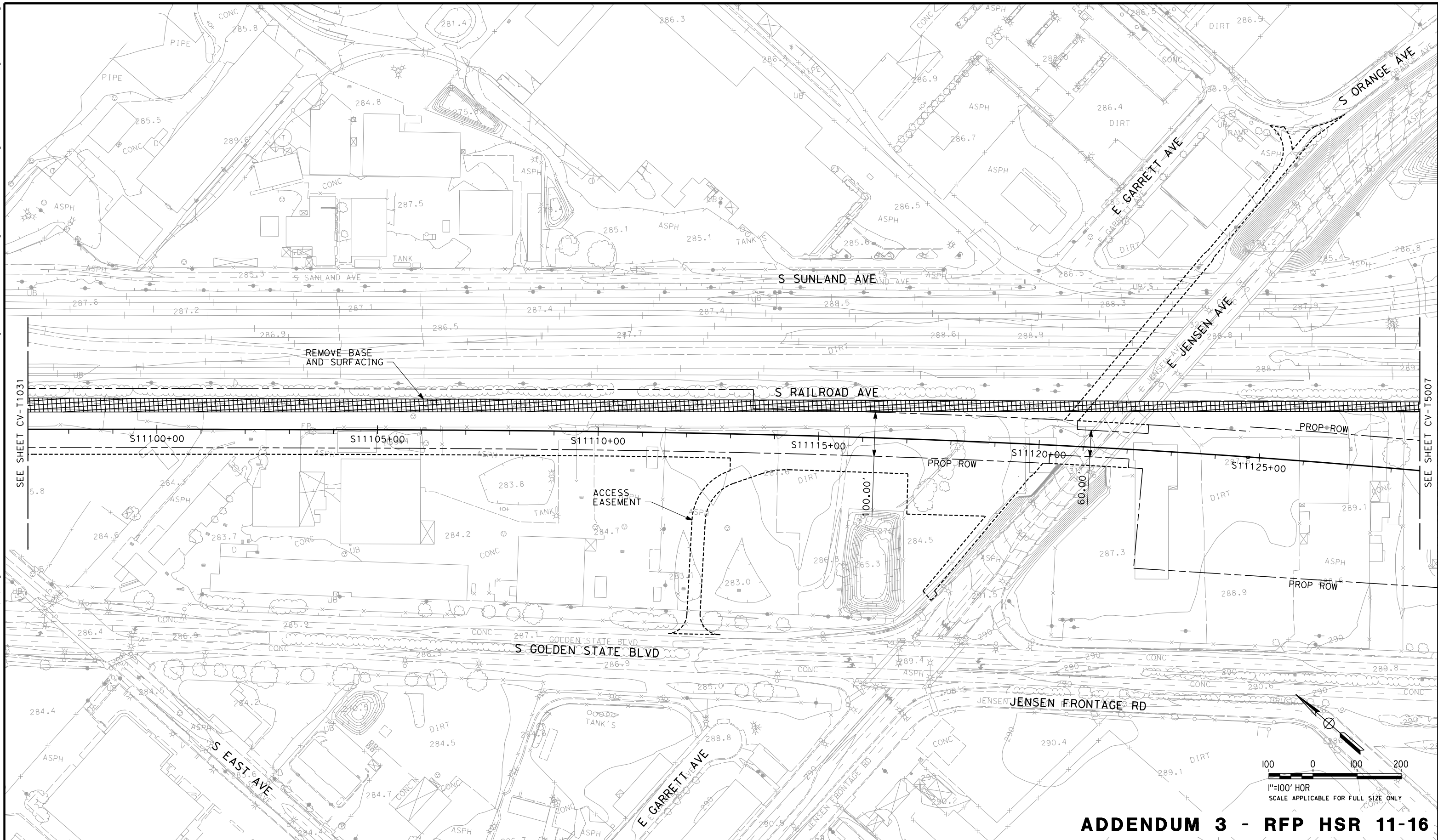


CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
ROADWAY  
ROAD CLOSURE LAYOUT  
S CHERRY AVE THROUGH E FLORENCE AVE

CONTRACT NO.  
DRAWING NO.  
CV-T5005  
SCALE  
AS SHOWN  
SHEET NO.



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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. BAMB
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BURGESS
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

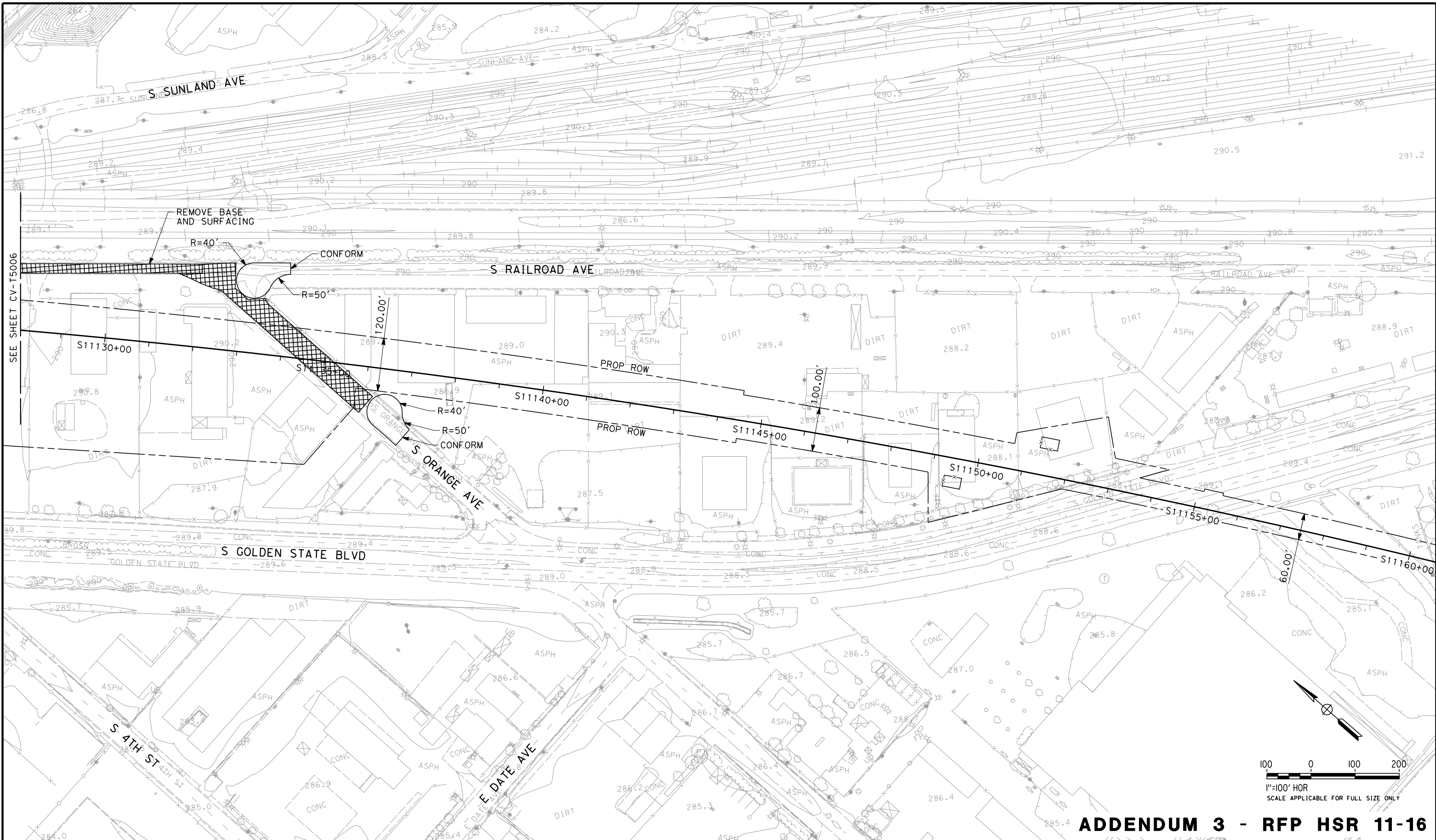
PACKAGE 1C  
ROADWAY  
ROAD CLOSURE LAYOUT  
S RAILROAD AVE

CONTRACT NO.
DRAWING NO. CV-T5006
SCALE AS SHOWN
SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16



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REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. BAMB
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BURGESS
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
ROADWAY  
ROAD CLOSURE LAYOUT  
S RAILROAD AVE

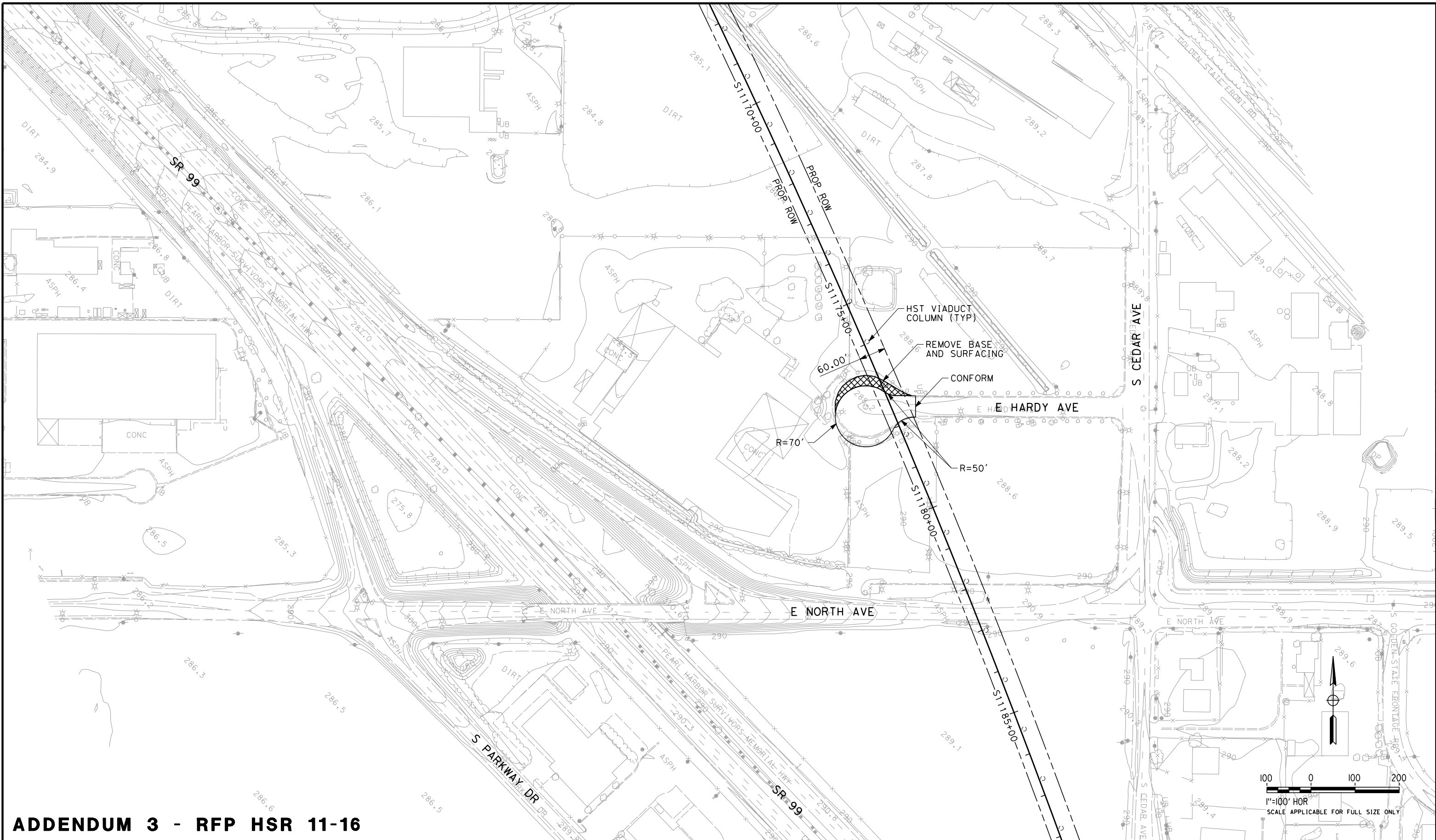
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SHEET NO.

**ADDENDUM 3 - RFP HSR 11-16**

06/29/2012 ADDENDUM 3 - RFP HSR 11-16



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ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. BAMB
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE R. COFFIN
DATE 06/06/12

PROPOSED PRELIMINARY DESIGN
NOT FOR CONSTRUCTION



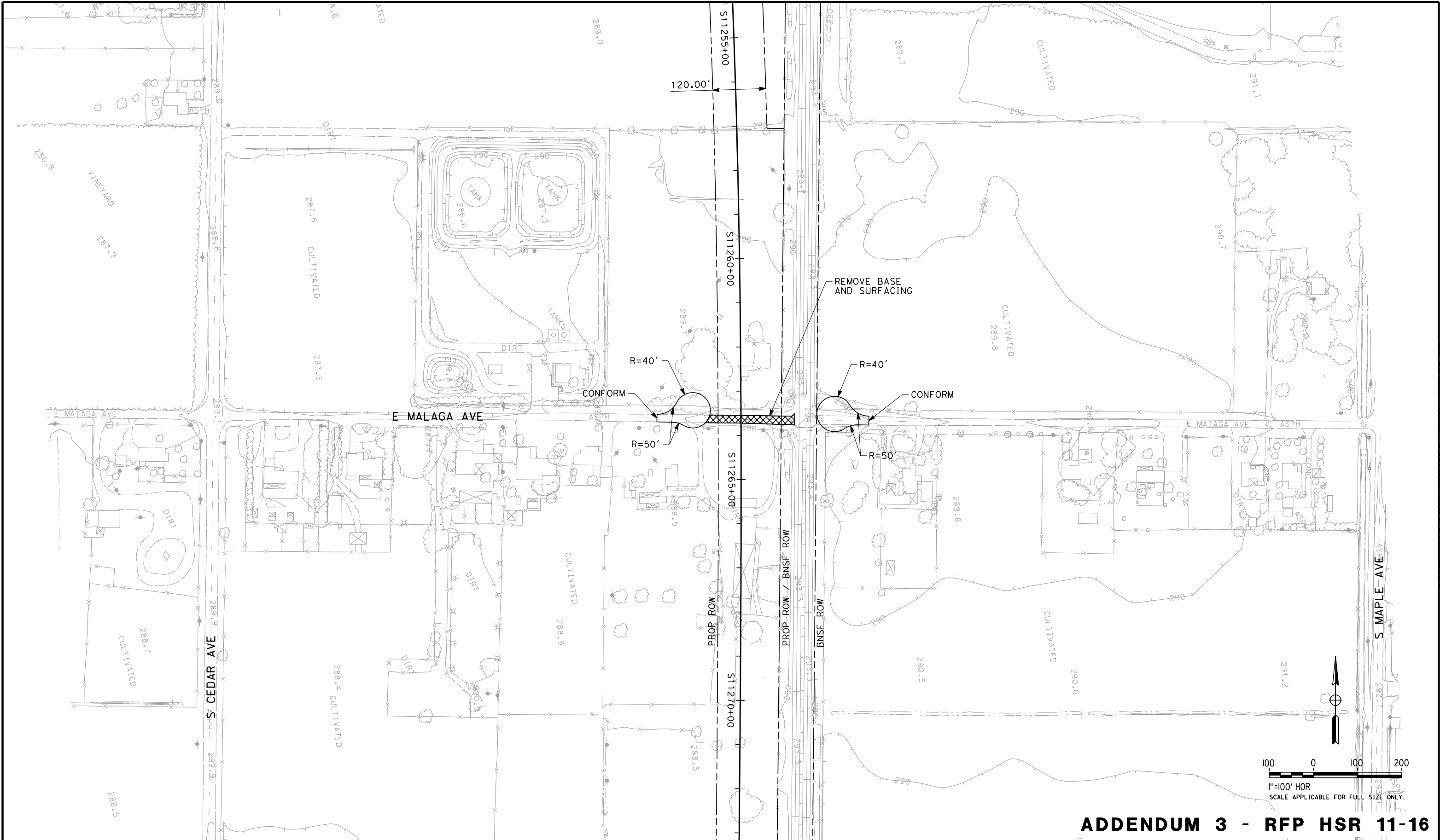
CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION PACKAGE 1C ROADWAY ROADWAY CLOSURE LAYOUT E HARDY AVE
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CONTRACT NO.
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SCALE AS SHOWN
SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16



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ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY M. BAMB
DRAWN BY E. SUDHAUSEN
CHECKED BY J. MONG
IN CHARGE R. COFFIN
DATE 06/06/12

PROPOSED  
PRELIMINARY  
DESIGN

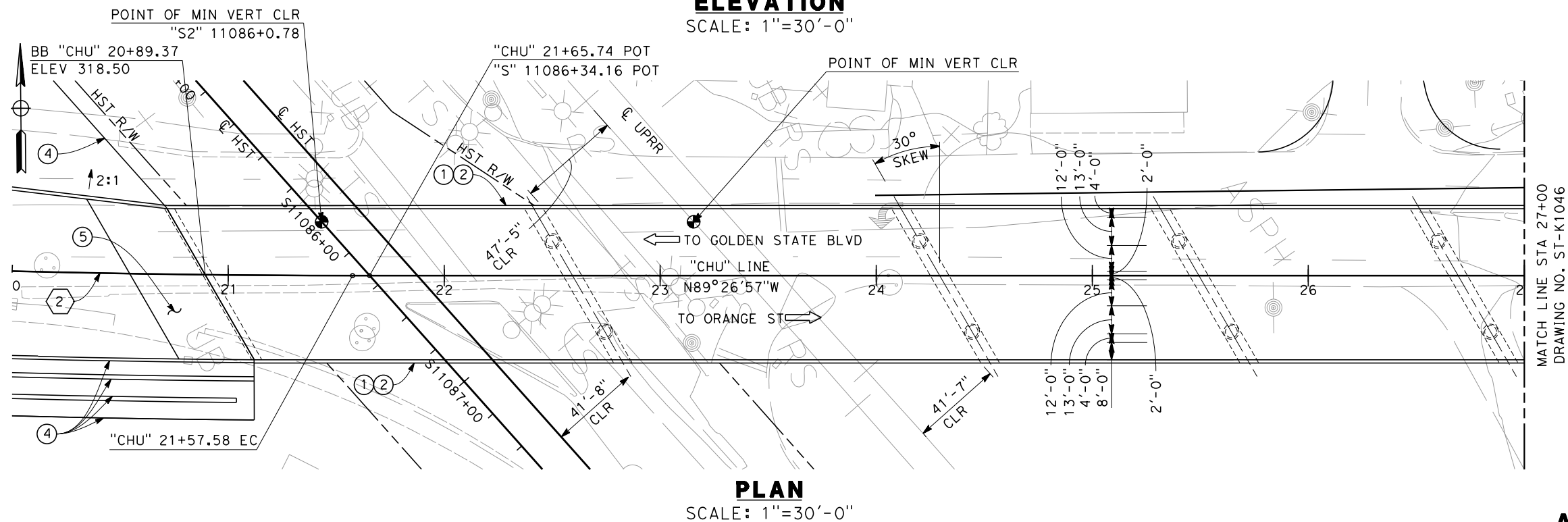
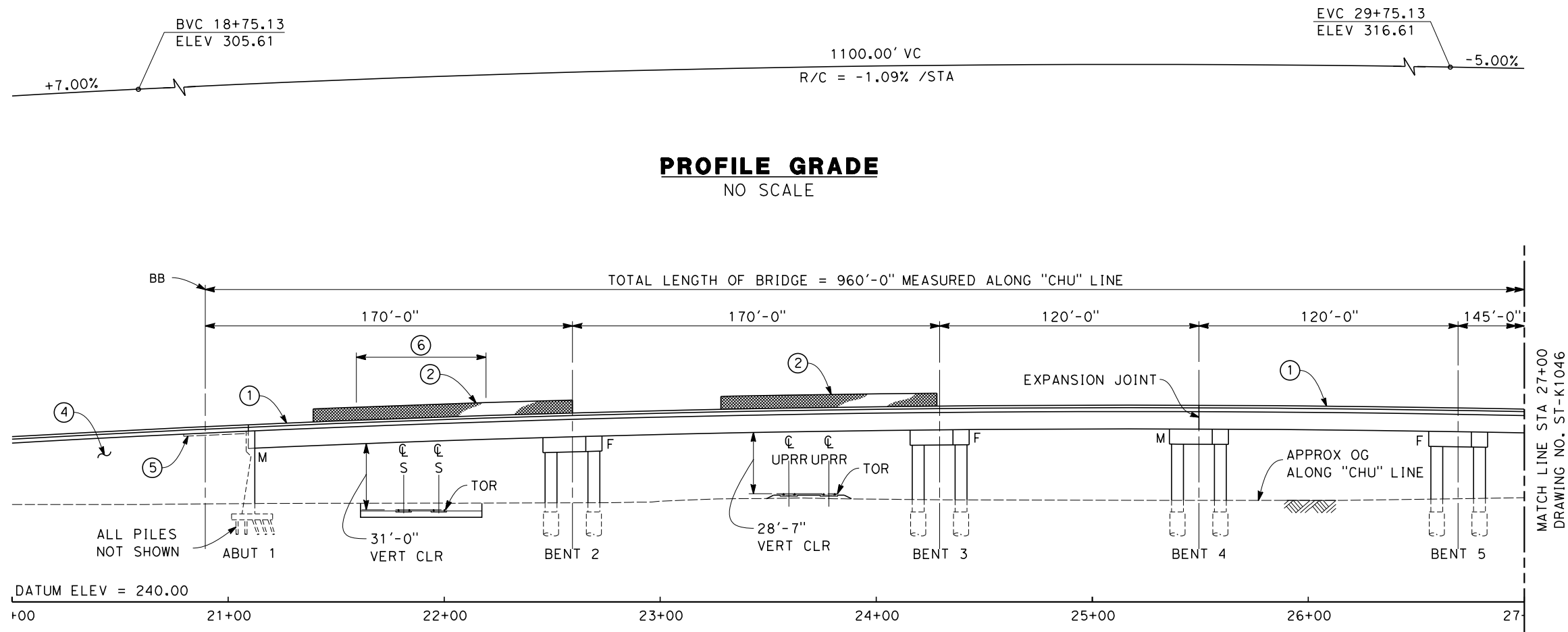
NOT FOR  
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
ROADWAY  
ROADWAY CLOSURE LAYOUT  
E MALAGA AVE

CONTRACT NO.
DRAWING NO. CV-T5009
SCALE AS SHOWN
SHEET NO.

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NOTES:

- FOR NOTES SEE DRAWING NO. ST-B0012
- CONCRETE BARRIER (TYPE 736 MODIFIED)
- AR FENCE
- FUTURE UTILITY OPENING
- RETAINING WALL, TYPE TO BE DETERMINED
- STRUCTURE APPROACH SLAB
- SOLID PLATE

**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

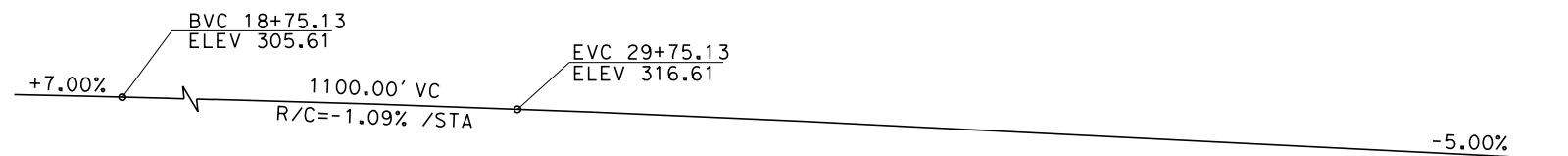
DESIGNED BY S.T. MAK
DRAWN BY J. VALENZUELA
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 04/27/12

<b>PROPOSED PRELIMINARY DESIGN</b>
<b>NOT FOR CONSTRUCTION</b>

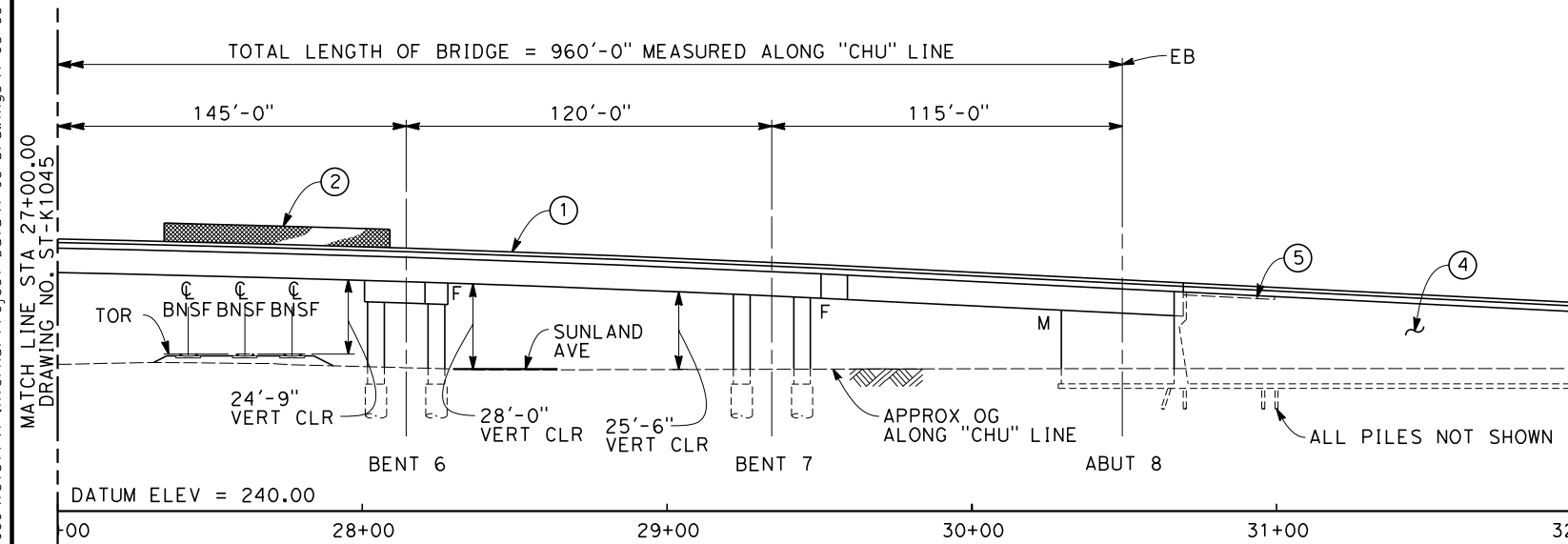


<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b>
<b>SIERRA SUBDIVISION</b>
PACKAGE 1C
ROADWAY STRUCTURE
DRAFT GENERAL PLAN
E CHURCH AVE

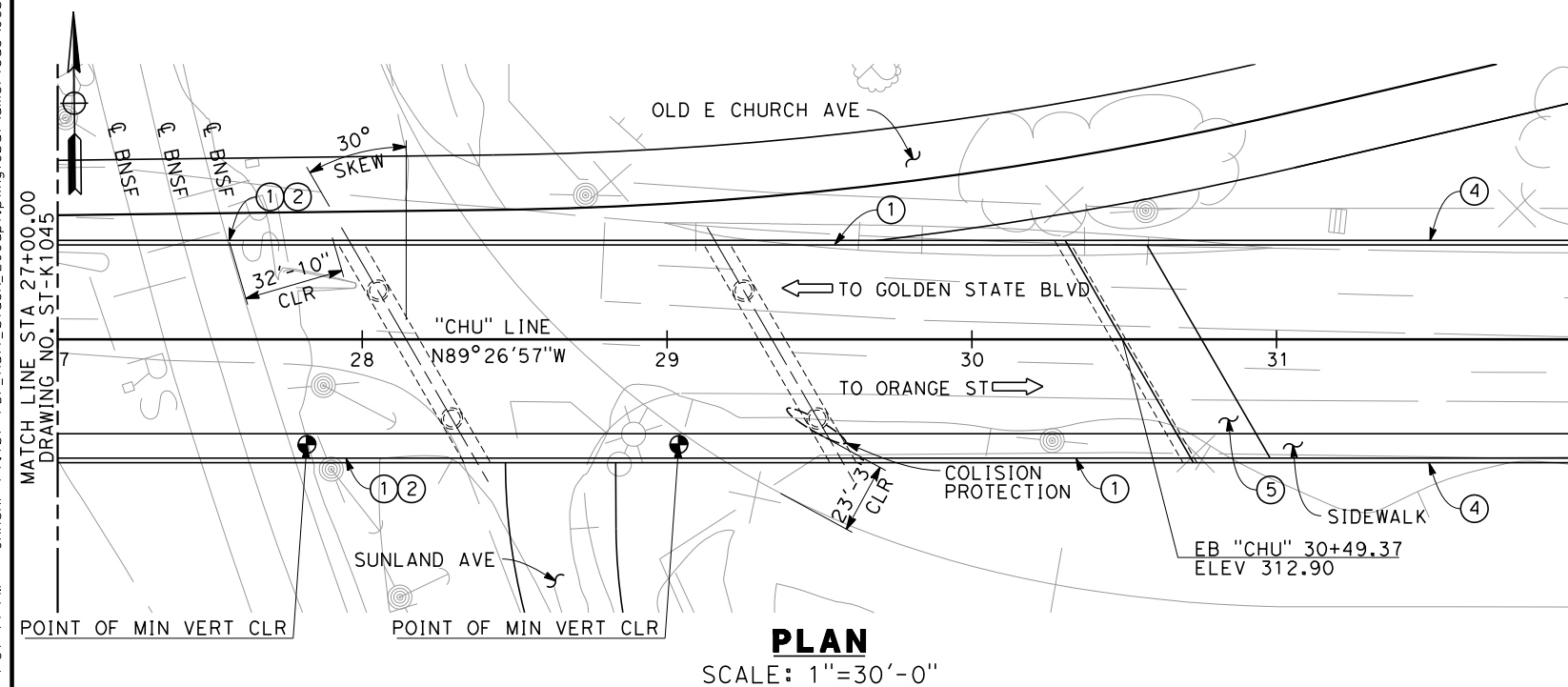
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DRAWING NO. ST-K1045
SCALE AS SHOWN
SHEET NO. 1 OF 2



**PROFILE GRADE**  
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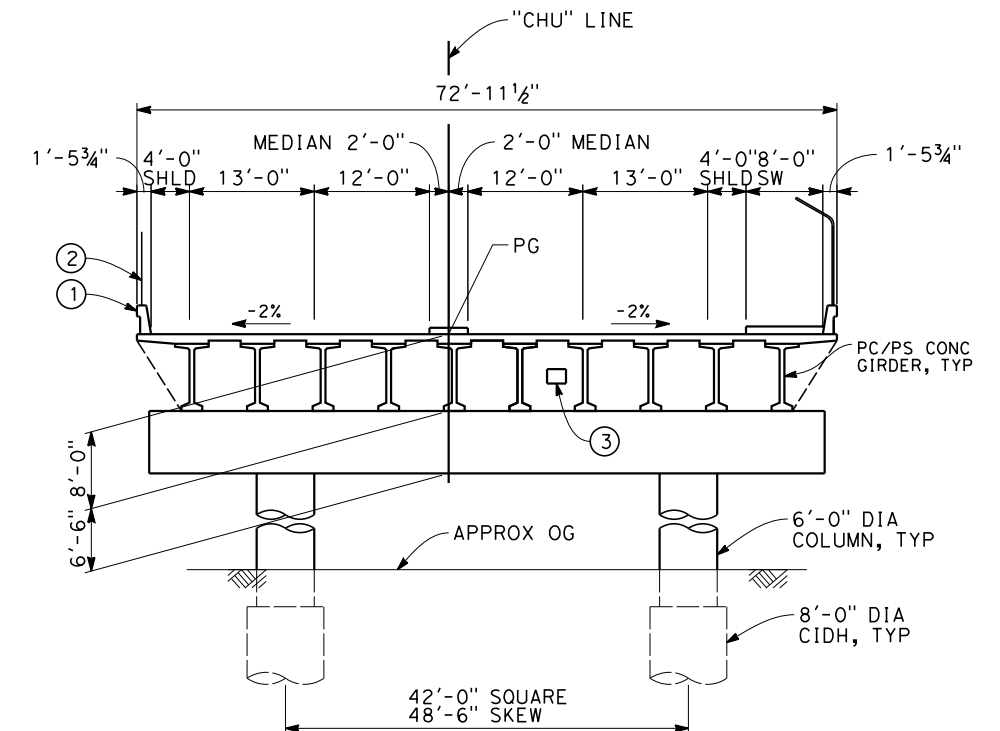


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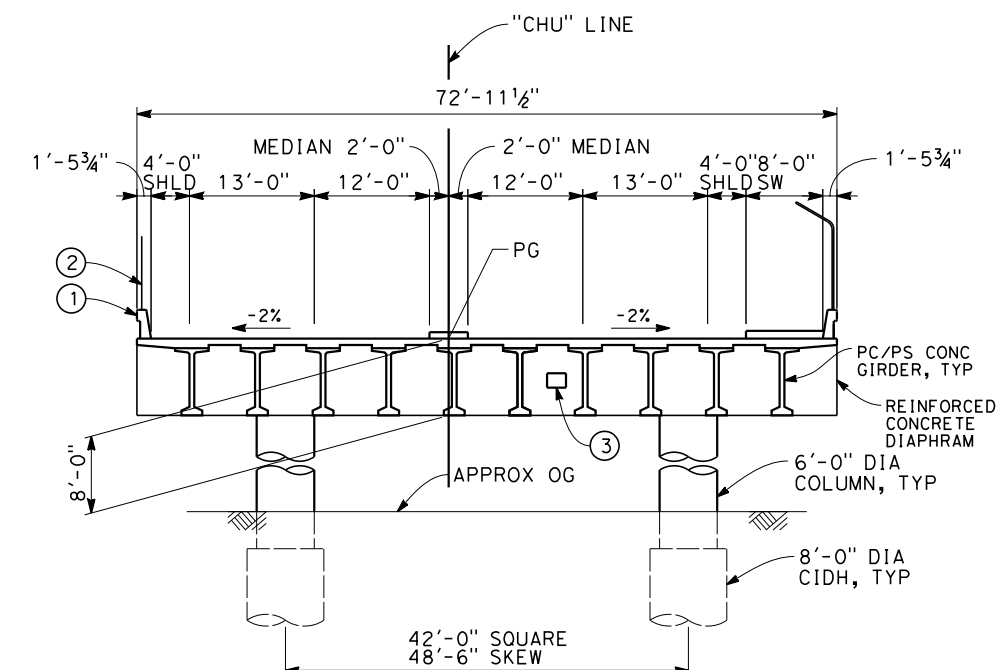


NOTES:

1. FOR NOTES SEE DRAWING NO. ST-B0012 AND ST-K1045



**TYPICAL SECTION (BENTS 2-6)**  
SCALE: 1"=10'-0"



**TYPICAL SECTION (BENT 7)**  
SCALE: 1"=10'-0"

## ADDENDUM 3 - RFP HSR 11-16

[illegible]

DESIGNED BY	S.T. MAK
DRAWN BY	J. VALENZUELA
CHECKED BY	A. ARMSTRONG
IN CHARGE	R. COFFIN
DATE	04/27/12

**PROPOSED  
PRELIMINARY  
DESIGN**

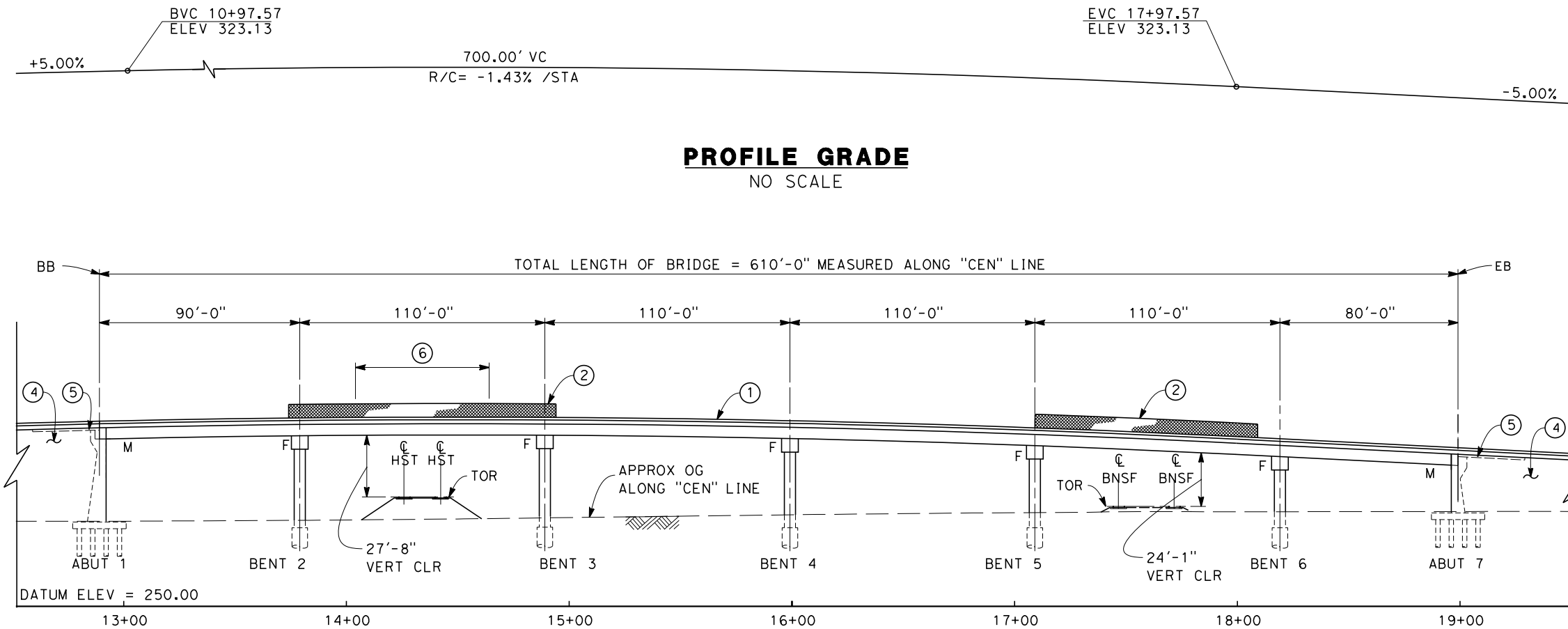
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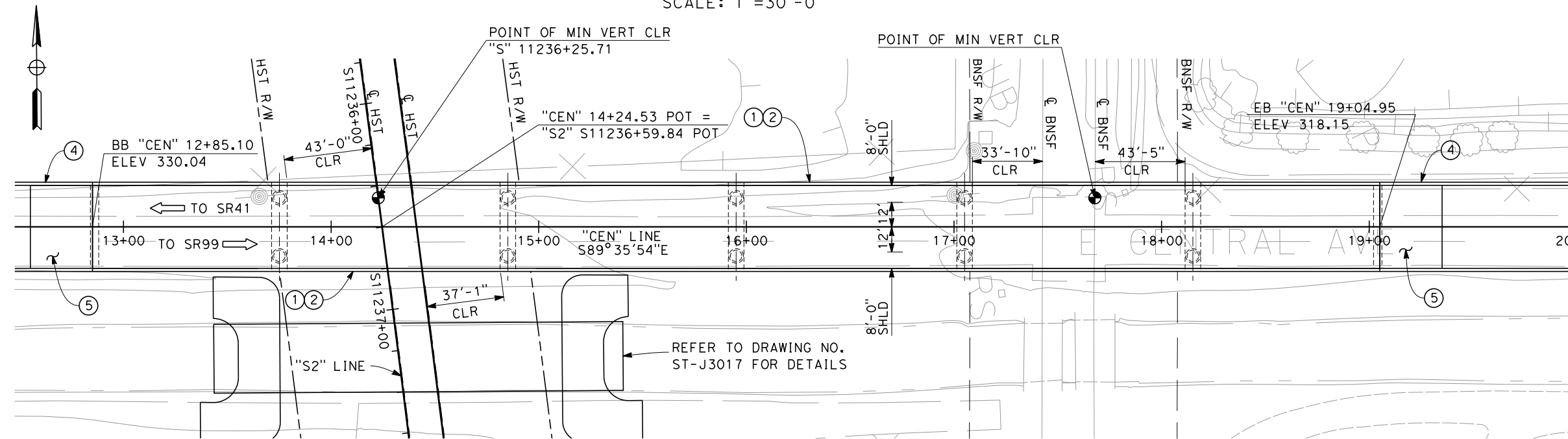
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**SIERRA SUBDIVISION**  
PACKAGE 1C  
ROADWAY STRUCTURE  
DRAFT GENERAL PLAN  
E CHURCH AVE

CONTRACT NO. HSR 06-0003
DRAWING NO. ST-K1046
SCALE AS SHOWN
SHEET NO. 2 OF 2

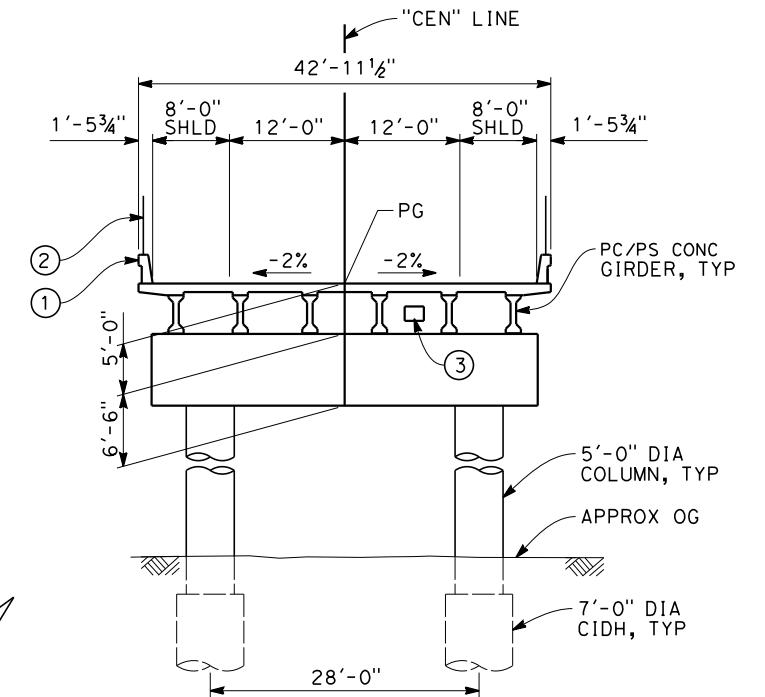
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**ELEVATION**  
SCALE: 1"=30'-0"



**PLAN**  
SCALE: 1"=30'-0"



**TYPICAL SECTION**  
SCALE: 1"=10'-0"

**NOTES:**

1. FOR NOTES SEE DRAWING NO. ST-B0012
- ① CONCRETE BARRIER (TYPE 736 MODIFIED)
- ② AR FENCE
- ③ FUTURE UTILITY OPENING
- ④ RETAINING WALL, TYPE TO BE DETERMINED
- ⑤ STRUCTURE APPROACH SLAB
- ⑥ SOLID PLATE

**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY S.T. MAK
DRAWN BY J. VALENZUELA
CHECKED BY A. ARMSTRONG
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

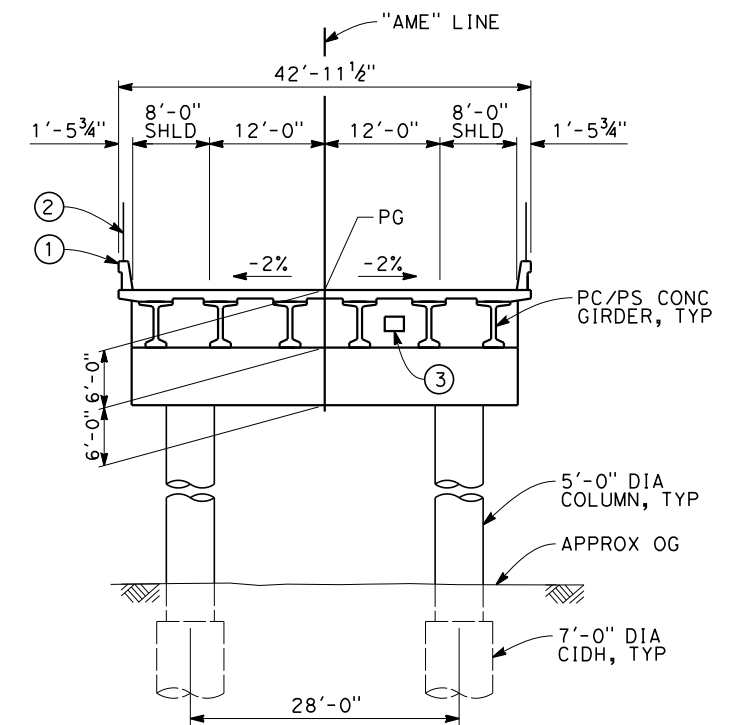
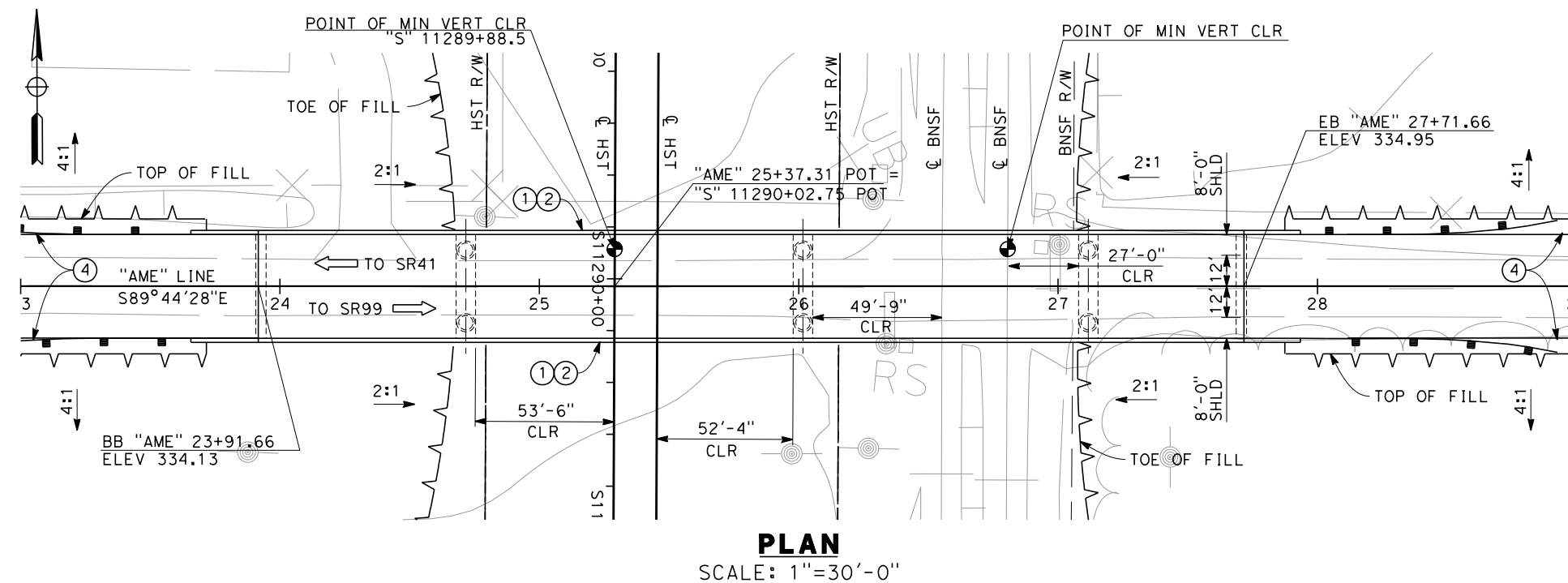
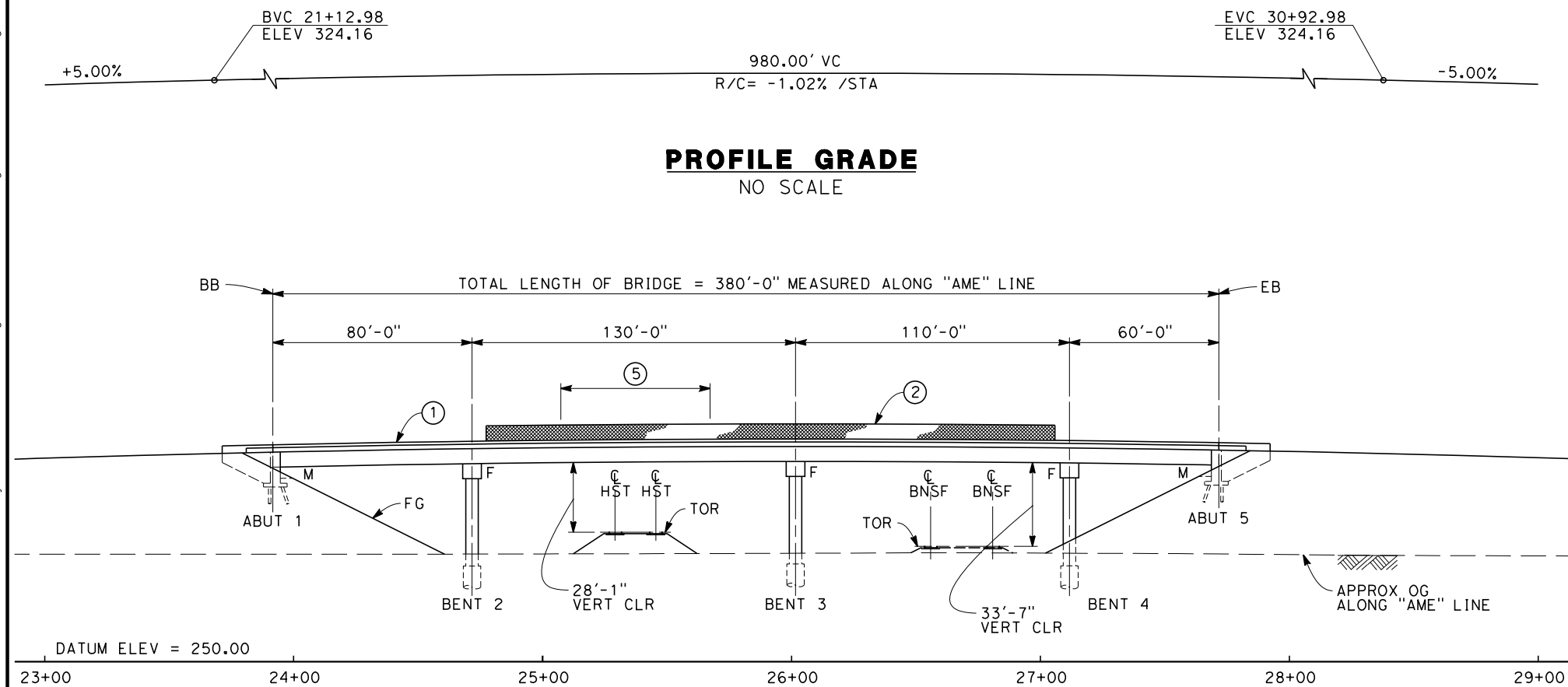


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
ROADWAY STRUCTURE  
DRAFT GENERAL PLAN  
E CENTRAL AVE




CONTRACT NO.
DRAWING NO. ST-K1047
SCALE AS SHOWN
SHEET NO.





- NOTES:
1. FOR NOTES SEE DRAWING NO. ST-B0012
  - ① CONCRETE BARRIER (TYPE 736 MODIFIED)
  - ② AR FENCE
  - ③ FUTURE UTILITY OPENING
  - ④ MBGR (SEE ROAD PLANS)
  - ⑤ SOLID PLATE

## ADDENDUM 3 - RFP HSR 11-16

						DESIGNED BY S.T. MAK	<b>PROPOSED PRELIMINARY DESIGN</b>  <b>NOT FOR CONSTRUCTION</b>	 		<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>SIERRA SUBDIVISION</b> PACKAGE 1C ROADWAY STRUCTURE DRAFT GENERAL PLAN E AMERICAN AVE	CONTRACT NO.
						DRAWN BY J. VALENZUELA					DRAWING NO. ST-K1048
						CHECKED BY A. ARMSTRONG					SCALE AS SHOWN
						IN CHARGE R. COFFIN					SHEET NO.
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 06/06/12					

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VOLUME 4 - UTILITIES

DRAWING No	DRAWING DESCRIPTION
GE-A0018	PACKAGE 1C - UTILITIES - INDEX OF DRAWINGS
UT-B0018	PACKAGE 1C - UTILITIES - GENERAL NOTES
UT-B0019	PACKAGE 1C - UTILITIES - LEGEND, SYMBOLS & ABBREVIATIONS
UT-B0020	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - KEY PLAN
UT-C4060	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA. 11030+00 TO11045+00
UT-C4061	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA. 11045+00 TO 11060+00
UT-C4062	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA. 11060+00 TO 11075+00
UT-C4063	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - E CHURCH AVE
UT-C4064	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA. 11090+00 TO 11105+00
UT-C4065	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA. 11105+00 TO 11120+00
UT-C4066	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA. 11120+00 TO 11135+00
UT-C4067	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA. 11135+00 TO 11150+00
UT-C4068	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA. 11150+00 TO 11165+00
UT-C4069	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA. 11165+00 TO 11180+00
UT-C4070	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA. 11180+00 TO 11195+00
UT-C4071	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA. 11195+00 TO 11210+00
UT-C4072	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA. 11210+00 TO 11225+00
UT-C4073	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - E CENTRAL AVE
UT-C4074	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA 11240+00 TO 11255+00
UT-C4075	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA. 11255+00 TO 11270+00
UT-C4076	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - STA. 11270+00 TO 11285+00
UT-C4077	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - E AMERICAN AVE
UT-C4078	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - E CALIFORNIA AVE
UT-C4079	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - E CALIFORNIA AVE / S E AVE
UT-C4080	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - S E AVE
UT-C4081	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - E CHURCH AVE
UT-C4082	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - E CHURCH AVE
UT-C4083	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - S E AVE
UT-C4084	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - E JENSEN AVE
UT-C4085	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - E CENTRAL AVE
UT-C4086	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - E CENTRAL AVE
UT-C4087	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - E AMERICAN AVE
UT-C4088	PACKAGE 1C - UTILITIES - COMPOSITE UTILITY PLAN - E AMERICAN AVE

VOLUME 4 - UTILITIES - CONT'D

DRAWING No	DRAWING DESCRIPTION
CV-B0021	PACKAGE 1C - UTILITIES - GRADING AND DRAINAGE - KEY MAP
CV-G1018	PACKAGE 1C - UTILITIES - GRADING AND DRAINAGE - STA. 11030+00 TO 11058+00
CV-G1019	PACKAGE 1C - UTILITIES - GRADING AND DRAINAGE - STA. 11058+00 TO 11086+00
CV-G1020	PACKAGE 1C - UTILITIES - GRADING AND DRAINAGE - STA. 11086+00 TO 11114+00
CV-G1021	PACKAGE 1C - UTILITIES - GRADING AND DRAINAGE - STA. 11114+00 TO 11142+00
CV-G1022	PACKAGE 1C - UTILITIES - GRADING AND DRAINAGE - STA. 11142+00 TO 11170+00
CV-G1023	PACKAGE 1C - UTILITIES - GRADING AND DRAINAGE - STA. 11170+00 TO 11198+00
CV-G1024	PACKAGE 1C - UTILITIES - GRADING AND DRAINAGE - STA. 11198+00 TO 11226+00
CV-G1025	PACKAGE 1C - UTILITIES - GRADING AND DRAINAGE - STA. 11226+00 TO 11254+00
CV-G1026	PACKAGE 1C - UTILITIES - GRADING AND DRAINAGE - STA. 11254+00 TO 11282+00
CV-G1027	PACKAGE 1C - UTILITIES - GRADING AND DRAINAGE - STA. 11282+00 TO 11300+00

ADDENDUM 3 - RFP HSR 11-16

						DESIGNED BY G. SCHLERETH	<div>PROPOSED PRELIMINARY DESIGN</div> <div>NOT FOR CONSTRUCTION</div>			<div>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</div> <div>PACKAGE 1C UTILITIES INDEX OF DRAWINGS</div>	CONTRACT NO.
						DRAWN BY J. BORGHESI					DRAWING NO. GE-A0018
						CHECKED BY S. BURGES					SCALE NO SCALE
						IN CHARGE R. COFFIN					SHEET NO.
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 06/06/12					

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GENERAL NOTES:

1. ALL MATERIAL AND WORK TO BE CONSTRUCTED AS SHOWN HERE ON THESE PLANS SHALL CONFORM TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS AND DETAILS OF THE CITY OF FRESNO, FRESNO METROPOLITAN FLOOD CONTROL DISTRICT (FMFCD), FRESNO IRRIGATION DISTRICT (FID), AND THE LATEST EDITION OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND PLANS.
2. CONTRACTOR SHALL FOLLOW THE PROJECT REQUIREMENTS CONTAINED IN THE SPECIFICATIONS AND PROJECT SPECIAL PROVISIONS. CONTRACTOR SHALL MAINTAIN A COPY OF THE SPECIFICATIONS AND APPROVED PROJECT PLANS AND SPECIAL PROVISIONS AT THE JOB SITE AT ALL TIMES.
3. CONTRACTOR SHALL OBTAIN ALL PERMITS NECESSARY FROM APPLICABLE AGENCIES TO PERFORM THE WORK SHOWN ON THESE PLANS PRIOR TO COMMENCING WORK.
4. CONTRACTOR SHALL NOTIFY THE CITY OF FRESNO, FMFCD, FID, PG&E, AT&T AND OTHER UTILITY ENTITIES AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF PARTICULAR WORK RELATIVE TO THE UTILITY AGENCY HAVING JURISDICTION.
5. CONTRACTOR SHALL INFORM THE UTILITY AGENCY HAVING JURISDICTION AT LEAST THREE (3) WORKING DAYS PRIOR TO WHEN WORK REQUIRING SPECIAL INSPECTION IS AVAILABLE FOR INSPECTION. ALL WORK PERFORMED WITHOUT REQUIRED INSPECTION OR NOTIFICATION IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE DIRECTION OF THE AUTHORITY AT THE CONTRACTOR’S EXPENSE WITH NO IMPACT TO THE PROJECT SCHEDULE.
6. CONTRACTOR SHALL COORDINATE ALL NECESSARY UTILITY RELOCATIONS, OR ANY WORK INVOLVING UTILITIES, WITH THE APPROPRIATE UTILITY AGENCIES.
7. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AT 811 AT LEAST TEN (10) DAYS PRIOR TO START OF CONSTRUCTION AND AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO THE START OF ANY EXCAVATION.
8. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATION BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS HAVE NOT BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATIONS AND DEPTHS OF ANY UNDERGROUND UTILITIES OR STRUCTURES WITHIN THE LIMITS OF THE PROJECT. IT SHALL BE THE CONTRACTOR’S RESPONSABILITY TO LOCATE, PROTECT AND MAINTAIN ALL EXISTING UTILITIES WITHIN THE LIMITS OF THE PROJECT. ANY ADDITIONAL COSTS INCURRED AS A RESULTS OF CONTRACTOR’S FAILURE TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR.
9. CONTRACTOR SHALL PROVIDE 24 HOUR EMERGENCY TELEPHONE NUMBERS TO THE CITY OF FRESNO POLICE DEPARTMENT, FIRE DEPARTMENT AND THE CITY ENGINEER AND NOTIFY THEM OF ANY LANE CLOSURES OR DETOURS. DETOURS SHALL NOT BE PERMITTED WITHOUT PRIOR WRITTEN APPROVAL BY THE CITY ENGINEER.
10. CONTRACTOR SHALL PROVIDE AND MAINTAIN SUFFICIENT SAFETY DEVICES INCLUDING BARRICADES, FENCING, WARNING SIGNS, LIGHTS OR FLAGGERS TO PROVIDE FOR THE SAFETY OF THE GENERAL PUBLIC WITHIN THE PROJECT AREA, TO THE SATISFACTION OF THE CITY ENGINEER. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
11. CONTRACTOR SHALL PROVIDE ONE (1) COMPLETE SET OF AS-BUILT DRAWINGS WITH CHANGES INDICATED IN RED INK ON FULL-SIZE DRAWINGS. AS-BUILTS SHALL BE DELIVERED TO THE AUTHORITY’S REPRESENTATIVE AT THE COMPLETION OF WORK PRIOR TO FINAL PROGRESS PAYMENT.
12. THE CONTRACTOR SHALL BE REQUIRED TO KEEP ALL CONSTRUCTION ACTIVITIES WITHIN THE PUBLIC RIGHT-OF-WAY AND EASEMENT OBTAINED FOR THE PROJECT UNLESS OTHERWISE SHOWN. THIS SHALL INCLUDE, BUT NOT LIMITED TO: VEHICLES AND EQUIPMENT, LIMITS OF TRENCH EXCAVATIONS, STOCKPILED NEW MATERIAL, EXCAVATED MATERIAL AND BACKFILL MATERIAL.

13. CONTRACTOR SHALL RESTORE ALL EXISTING PRIVATE AND PUBLIC IMPROVEMENTS TO THEIR EXISTING CONDITION OR BETTER TO THE SATISFACTION OF THE CITY ENGINEER INCLUDING, BUT NOT LIMITED TO: LANDSCAPING, IRRIGATION, DRIVEWAYS, AC PAVING, CONCRETE AND UTILITIES.
14. CONTRACTOR SHALL PROTECT ALL SURVEY MONUMENTS AND BENCHMARKS WITHIN THE WORK AREA. ANY PERMANENT SURVEY MONUMENTS OR MARKERS DESTROYED BY THE CONTRACTOR’S OPERATIONS SHALL BE REPLACED BY A LICENSED LAND SURVEYOR AT THE CONTRACTOR’S EXPENSE.
15. ALL CONSTRUCTION CONTROL REQUIRED FOR CONSTRUCTION ACTIVITIES SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD). ALL PROPOSED LANE CLOSURES AND DETOURS REQUIRE A TRAFFIC CONTROL PLAN TO BE SUBMITTED FOR REVIEW AND APPROVAL BY THE AUTHORITY REPRESENTATIVE AND THE CITY ENGINEER OF THE CITY OF FRESNO AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE SCHEDULED CLOSURE.
16. CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE PROPERTY AND DRIVEWAYS, OR PROVIDE ALTERNATE/TEMPORARY ACCESS, AT ALL TIMES.
17. ALL TREES WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE PROTECTED FROM CONSTRUCTION DAMAGE, UNLESS OTHERWISE IDENTIFIED FOR REMOVAL ON PLANS.
18. CONSTRUCTION ACTIVITIES AFFECTING SERVICE TO ANY FIRE HYDRANT SHALL BE COORDINATED WITH THE CITY OF FRESNO FIRE DEPARTMENT A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO STARTING WORK.
19. CONTRACTOR SHALL CONFORM TO EXISTING STREETS, LANDSCAPE AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION AND CONFORM IN PAVING, CURBS, GUTTERS AND SIDEWALK TO AVOID ANY ABRUPT CHANGES IN GRADES OR CROSS SLOPES, LOW SPOTS, OR HAZARDOUS CONDITIONS.
20. CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS AND ELEVATIONS SHOWN ON THE PLANS AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR POTENTIAL FIELD CONFLICTS PRIOR TO PROCEEDING WITH THE WORK. ANY COSTS RESULTING FROM THE CONTRACTOR’S FAILURE TO REPORT SUCH CONFLICTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
21. CONTRACTOR SHALL CONDUCT GRADING AND CONSTRUCTION ACTIVITIES IN SUCH A MANNER TO CONTROL AIRBORNE DUST AND RELATED DAMAGE TO ADJACENT PROPERTIES. SUFFICIENT WATERING TO CONTROL DUST AND WIND BLOWN MATERIAL IS REQUIRED AT ALL TIMES AND CONTRACTORS ASSUMES FULL LIABILITY FOR DAMAGE CLAIMS RELATING TO DUST.
22. ANY MATERIAL CONTAINING ASBESTOS OR OTHER HAZARDOUS MATERIAL THAT ARE REMOVED FROM THE PROJECT SITE MUST BE PERFORMED ONLY BY A PRE-APPROVED STATE OF CALIFORNIA LICENSED ASBESTOS ABATEMENT CONTRACTOR REGISTERED WITH CAL-OSHA. ASBESTOS AND OTHER HAZARDOUS MATERIAL HANDLING MUST BE IN ACCORDANCE WITH CAL-OSHA, FED-OSHA, U.S. EPA, AND CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCE CONTROL.
23. EXISTING LATERALS LEFT IN PLACE FOR FUTURE SERVICE. CONTRACTOR SHALL CONFIRM LIMITS OF REMOVAL FOR ABANDONED LATERALS WITH UTILITY AGENCY.

SPECIAL NOTE FOR UTILITY DATA:

THE LOCATION OF EXISTING UTILITIES ARE BASED ON TWO SOURCES:  
1.) TOPOGRAPHIC SURVEY  
2.) G.I.S.  
THE CONTRACTOR SHALL CONDUCT HIS/HER OWN SURVEY AND VERIFY THE LOCATION OF EXISTING UTILITIES AND RECONCILE THE SURVEY DATA AND GIS DATA.

SPECIAL NOTE FOR FUTURE STORM DRAIN LINES:

ALL FUTURE SD LINES ANNOTATED AS ‘FUTURE (BY OTHERS)’ ARE NOT IN CONTRACT AND ARE SHOWN FOR INFORMATION ONLY. COORDINATE WITH FMFCD FOR FUTURE SD LINES CROSSING THE HST ROW AND PROVIDE CASING FOR FUTURE SD LINES. CASING INVERT ELEVATIONS AND SLOPES SHALL BE DETERMINED BY FMFCD.

SPECIAL NOTES FOR WATER AND SEWER:

1. CONTRACTOR SHALL LOCATE, PROTECT AND RECONNECT ALL EXISTING WATER AND SEWER SERVICE LATERALS TO NEW WATER AND SEWER MAINS.
2. CONTRACTOR SHALL RELOCATE EXISTING WATER METERS TO EDGE OF NEW ROADWAYS IN ACCORDANCE WITH CITY OF FRESNO WATER STANDARD DRAWINGS.
3. WATER MAIN HUNG ON OR SUPPORTED BY BRIDGE STRUCTURES SHALL BE CIP.

APPLICABLE STANDARD PLANS

CITY OF FRESNO STANDARD DRAWINGS:

- PUBLIC WORKS STANDARD DRAWINGS
- WATER STANDARD DRAWINGS
- SEWER STANDARD DRAWINGS
- ELECTRICAL STANDARD DRAWINGS
- ALTERNATE PUBLIC IMPROVEMENT DRAWINGS
- INTELLIGENT TRANSPORTATION SYSTEM STANDARD DRAWINGS

FRESNO METROPOLITAN FLOOD CONTROL DISTRICT STANDARD DRAWINGS:

- A-1 THRU A-9
- B-1 THRU B-7
- C-1
- D-1 THRU D-9
- E-1 THRU E-8
- F-1 THRU F-4
- G-1 THRU G-10

FRESNO IRRIGATION DISTRICT ENGINEERING HANDBOOK OF SPECIFICATIONS AND DRAWINGS:

PAGES 12 THRU 59

ADDENDUM 3 - RFP HSR 11-16

						DESIGNED BY C. ALLEN	PROPOSED PRELIMINARY DESIGN  NOT FOR CONSTRUCTION	 	CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION PACKAGE 1C UTILITIES COMPOSITE UTILITY PLAN GENERAL NOTES	CONTRACT NO.  DRAWING NO. UT-B0018 SCALE NO SCALE SHEET NO.
						DRAWN BY C. DOEHNE				
						CHECKED BY M. POLISCHUK				
						IN CHARGE J. LABANOWSKI				
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 06/06/12				

06/29/2012 ADDENDUM 3 - RFP HSR 11-16

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LEGENDS AND SYMBOLS

EXISTING	NEW	DESCRIPTION
		ELECTRICAL OVERHEAD LINE
		ELECTRICAL UNDERGROUND LINE
		NATURAL GAS LINE
		IRRIGATION LINE
		OIL LINE
		STORM DRAIN LINE
		SEWER LINE
		TELECOMMUNICATION OVERHEAD LINE
		TELECOMMUNICATION LINE
		WATER LINE
		TELEPHONE LINE
		TELEVISION OVERHEAD LINE
		TELEVISION LINE
		FIBER OPTIC LINE
		SEWER MANHOLE
		STORM DRAIN MANHOLE
		FIRE HYDRANT
		NORTH ARROW
		RIGHT-OF-WAY
		HST TRACK CENTER LINE
		UTILITY TO BE REMOVED OR RELOCATED

ABBREVIATIONS

AB	AGGREGATE BASE	HOR	HORIZONTAL
ABN	ABANDON		
AC	ASPHALT CONCRETE	IN	INCH
ACB	ASPHALT CONCRETE BASE	INV	INVERT
ACP	ASBESTOS CEMENT PIPE	IRR	IRRIGATION
A/G	AT GRADE		
APPROX	APPROXIMATE	L	LENGTH
AVE	AVENUE	LED	LIGHT EMITTING DIODE
		LG	LIP OF GUTTER
		LS	LANDSCAPE
		LT	LEFT
BCR	BEGIN CURVE RETURN		
BEG	BEGIN	MIN	MINIMUM
BLDG	BUILDING		
BLVD	BOULEVARD		
B.O.	BLOW-OFF		
BOC	BACK OF CURB	N	NORTH, NORTHING, NEW
BSW	BACK OF SIDEWALK	NIC, N.I.C.	NOT IN CONTRACT
BVCE	BEGIN VERTICAL CURVE ELEVATION	NO	NUMBER
BVCS	BEGIN VERTICAL CURVE STATION	N.T.S.	NOT TO SCALE
CB	CATCH BASIN	(P)	PROPOSED
CD	CURB DRAIN	PCC	PORTLAND CEMENT CONCRETE
C&G	CURB AND GUTTER	PRKG	PARKING
CH	CURB HEIGHT	PVC	POLYVINYL CHLORIDE
CIP	CAST IRON PIPE	PVMT	PAVEMENT
CL	CENTERLINE		
CMP	CORRUGATED METAL PIPE	R	RADIUS
COF	CITY OF FRESNO	RCP	REINFORCED CONCRETE PIPE
CTV	CABLE TELEVISION	REQ'D	REQUIRED
CV	CURVE	R/R	REMOVE AND REPLACE/RELOCATE
		RT	RIGHT
		R/W, ROW	RIGHT OF WAY
D	DEPTH		
DI	DRAINAGE INLET	S	SLOPE, SOUTH, SEWER
DIA	DIAMETER	SD	STORM DRAIN
DIP	DUCTILE IRON PIPE	SDI	STORM DRAIN INLET
DWG	DRAWING	SDMH	STORM DRAIN MANHOLE
		SF	SQUARE FEET
E	ELECTRICAL, ELECTRIC	SHLD	SHOULDER
E	EAST, EXISTING	SR	STATE ROUTE
EC	END HORIZONTAL CURVE	SS	SANITARY SEWER
EDG	EDGE	SSMH	SANITARY SEWER MANHOLE
EL OR ELEV	ELEVATION	ST	STREET
ELEC	ELECTRICAL, ELECTRIC	STA	STATION
ELEC OH	ELECTRICAL OVERHEAD	SW	SIDEWALK
ELL	ELBOW		
EP, EOP	EDGE OF PAVEMENT	T	TELEPHONE, TOTAL
ETW	EDGE OF TRAVEL WAY	TC	TELECOMMUNICATION
EVCE	END OF VERTICAL CURVE ELEVATION	TCE	TEMPORARY CONSTRUCTION EASEMENT
EVCS	END OF VERTICAL CURVE STATION	TEL	TELEPHONE
EXIST, EX, (E)	EXISTING	TOC	TOP OF CURB
		TS	TRAFFIC SIGNAL
		TYP	TYPICAL
FDAC	FULL DEPTH ASPHALT CONCRETE	UG, U/G	UNDERGROUND
FH	FIRE HYDRANT		
FID	FRESNO IRRIGATION DISTRICT	VAR	VARIES
FMFCD	FRESNO METROPOLITAN FLOOD CONTROL DISTRICT	VC	VERTICAL CURVE
		VCP	VITRIFIED CLAY PIPE
F.O.	FIBER OPTIC	W	WATER, WEST
FOC	FACE OF CURB	W/	WITH
FUT	FUTURE	WM	WATER MAIN
		WV	WATER VALVE
G	GAS		
GALV	GALVANIZED		
GB	GRADE BREAK		
GIS	GEOGRAPHICAL INFORMATION SYSTEM		
GND	GROUND		
GSB	GOLDEN STATE BLVD		
GTR	GUTTER		
GV	GAS VALVE		

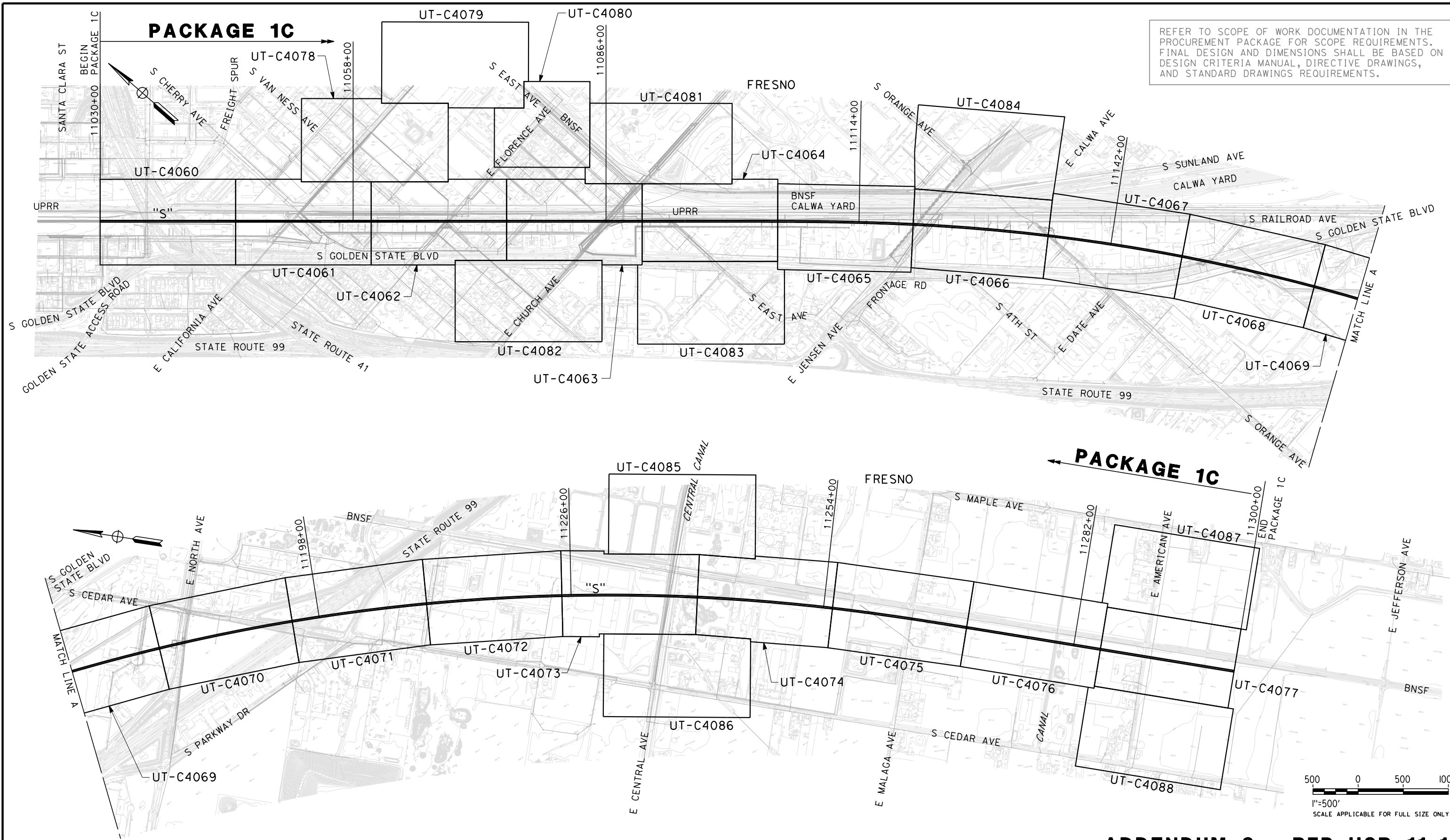
ADDENDUM 3 - RFP HSR 11-16

						DESIGNED BY C. ALLEN	<b>PROPOSED PRELIMINARY DESIGN</b>			<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b> PACKAGE 1C UTILITIES COMPOSITE UTILITY PLAN LEGEND, SYMBOLS & ABBREVIATIONS	CONTRACT NO.
					DRAWN BY C. DOEHNE	DRAWING NO. UT-B0019					
					CHECKED BY M. POLISCHUK	SCALE NO SCALE					
					IN CHARGE J. LABANOWSKI	SHEET NO.					
					DATE 06/06/12						
REV	DATE	BY	CHK	APP	DESCRIPTION						

06/29/2012 ADDENDUM 3 - RFP HSR 11-16



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## ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY P. TONKIN
CHECKED BY M. POLISCHUK
IN CHARGE R. COFFIN
DATE 06/06/12

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**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
KEY MAP

CONTRACT NO.
DRAWING NO. UT-B0020
SCALE AS SHOWN
SHEET NO.

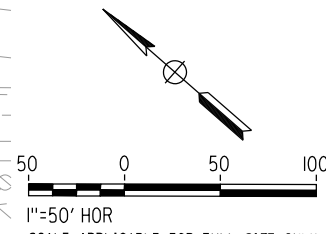
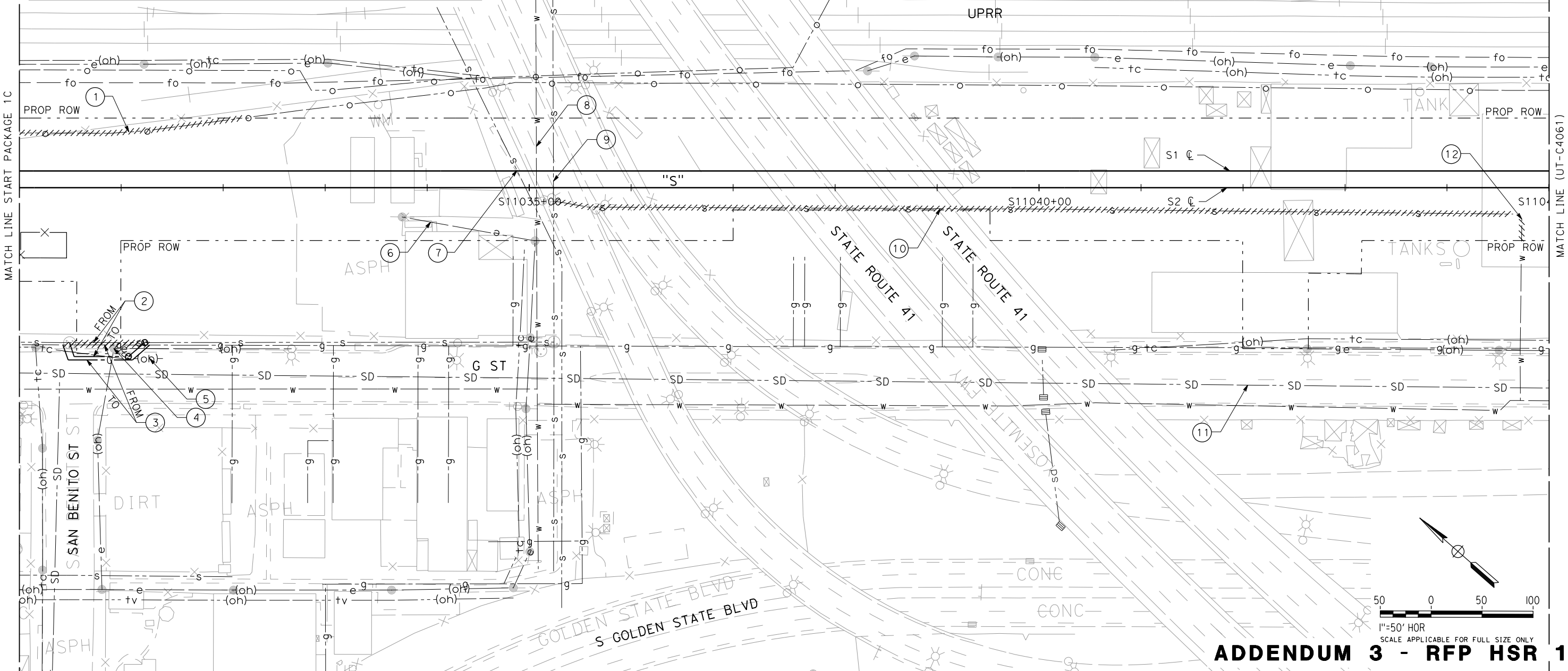
06/29/2012 ADDENDUM 3 - RFP HSR 11-16



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UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
1	OIL (ABANDONED)	UNKNOWN	CHEVRON	REMOVE
2	SEWER	10"	CITY OF FRESNO	RELOCATE
3	GAS	6"	PG&E	RELOCATE
4	OH POWER	UNKNOWN	PG&E	RELOCATE
5	OH TELECOM	NA	UNKNOWN	RELOCATE
6	OH POWER	UNKNOWN	PG&E	RELOCATE
7	SEWER	27"	CITY OF FRESNO	PROTECT IN PLACE
8	WATER	12"	CITY OF FRESNO	PROTECT IN PLACE
9	SEWER	18"	CITY OF FRESNO	PROTECT IN PLACE
10	SEWER	8"	CITY OF FRESNO	REMOVE
11	STORM DRAIN	36"	FMFCD	FUTURE (BY OTHERS)
12	WATER	8"	CITY OF FRESNO	REMOVE



ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

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**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
STA. 11030+00 TO STA. 11045+00

CONTRACT NO.
DRAWING NO. UT-C4060
SCALE AS SHOWN
SHEET NO.

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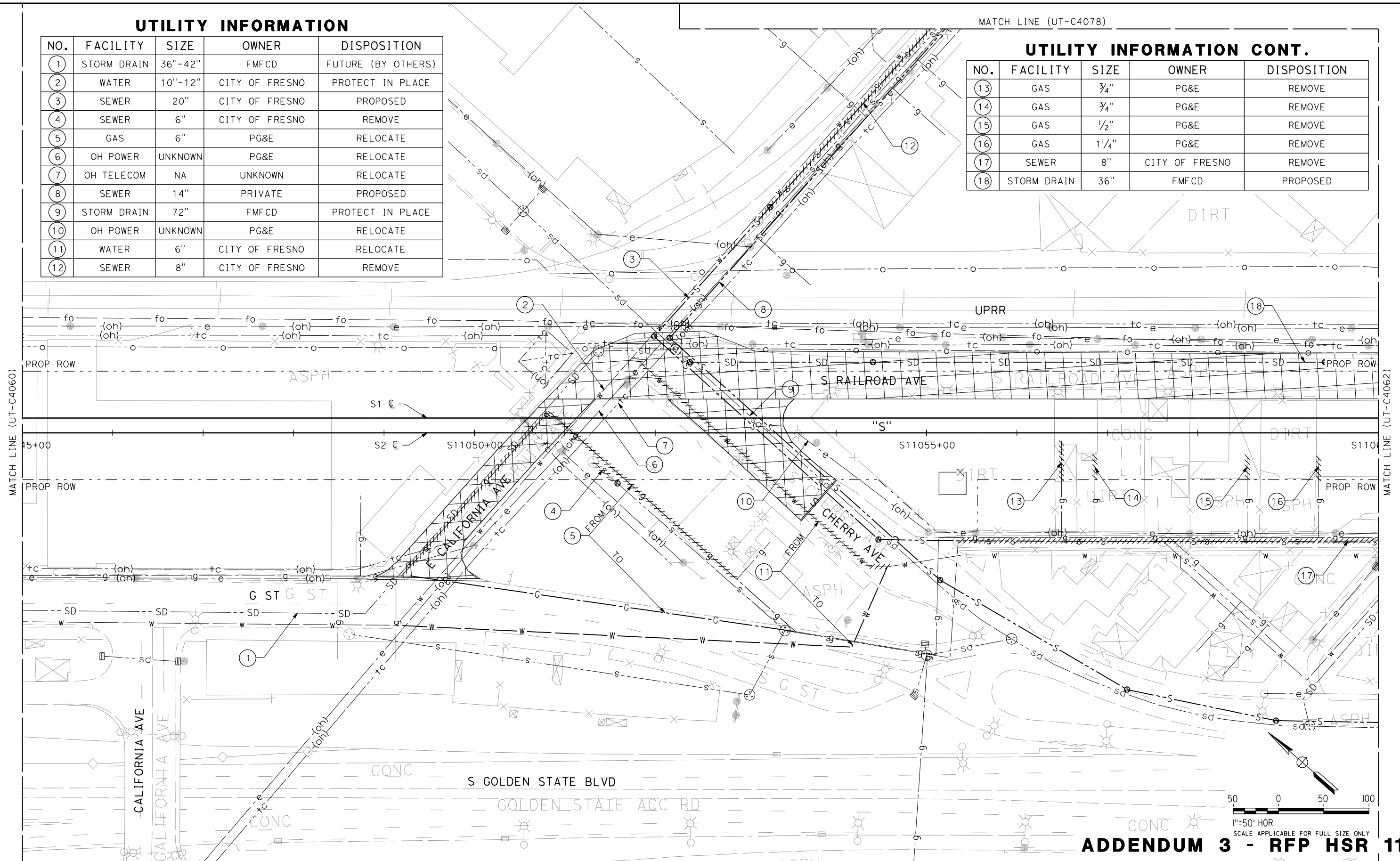
### UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
①	STORM DRAIN	36"-42"	FMFCD	FUTURE (BY OTHERS)
②	WATER	10"-12"	CITY OF FRESNO	PROTECT IN PLACE
③	SEWER	20"	CITY OF FRESNO	PROPOSED
④	SEWER	6"	CITY OF FRESNO	REMOVE
⑤	GAS	6"	PG&E	RELOCATE
⑥	OH POWER	UNKNOWN	PG&E	RELOCATE
⑦	OH TELECOM	NA	UNKNOWN	RELOCATE
⑧	SEWER	14"	PRIVATE	PROPOSED
⑨	STORM DRAIN	72"	FMFCD	PROTECT IN PLACE
⑩	OH POWER	UNKNOWN	PG&E	RELOCATE
⑪	WATER	6"	CITY OF FRESNO	RELOCATE
⑫	SEWER	8"	CITY OF FRESNO	REMOVE

MATCH LINE (UT-C4078)

### UTILITY INFORMATION CONT.

NO.	FACILITY	SIZE	OWNER	DISPOSITION
⑬	GAS	¾"	PG&E	REMOVE
⑭	GAS	¾"	PG&E	REMOVE
⑮	GAS	½"	PG&E	REMOVE
⑯	GAS	1¼"	PG&E	REMOVE
⑰	SEWER	8"	CITY OF FRESNO	REMOVE
⑱	STORM DRAIN	36"	FMFCD	PROPOSED



REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE J. LABANOWSKI
DATE 06/06/12

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**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

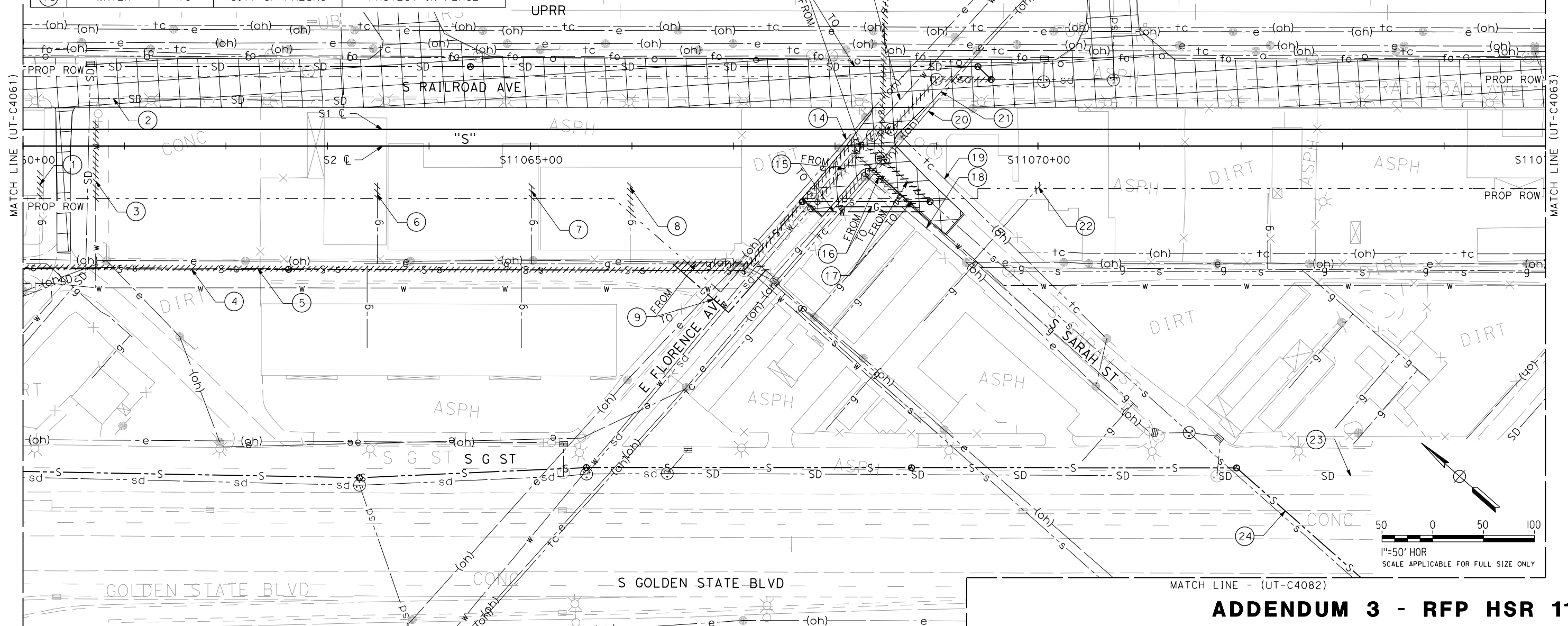
PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
STA. 11045+00 TO STA. 11060+00

CONTRACT NO.
DRAWING NO. UT-C4061
SCALE AS SHOWN
SHEET NO.



UTILITY INFORMATION				
NO.	FACILITY	SIZE	OWNER	DISPOSITION
①	GAS	1¼"	PG&E	REMOVE
②	STORM DRAIN	36"	FMFCD	FUTURE (BY OTHERS)
③	WATER	6"	CITY OF FRESNO	REMOVE
④	SEWER	20"	CITY OF FRESNO	PROPOSED
⑤	SEWER	8"	CITY OF FRESNO	REMOVE
⑥	GAS	1"	PG&E	REMOVE
⑦	GAS	1"	PG&E	REMOVE
⑧	GAS	1"	PG&E	REMOVE
⑨	GAS	2"	PG&E	RELOCATE
⑩	SEWER	20"	CITY OF FRESNO	RELOCATE (REVERSE FLOW)
⑪	SEWER	20"	CITY OF FRESNO	REMOVE
⑫	STORM DRAIN	36"	FMFCD	RELOCATE
⑬	WATER	10"	CITY OF FRESNO	PROTECT IN PLACE

NO.	FACILITY	SIZE	OWNER	DISPOSITION
14	OH POWER	UNKNOWN	PG&E	RELOCATE
15	WATER	8"	CITY OF FRESNO	RELOCATE
16	GAS	2"	PG&E	RELOCATE
17	SEWER	8"-20"	CITY OF FRESNO	RELOCATE
18	OH POWER	UNKNOWN	PG&E	RELOCATE
19	OH TELECOM	NA	UNKNOWN	RELOCATE
20	OH TELECOM	NA	UNKNOWN	RELOCATE
21	OH POWER	UNKNOWN	PG&E	RELOCATE
22	GAS	1"	PG&E	REMOVE
23	STORM DRAIN	36"	FMFCD	FUTURE (BY OTHERS)
24	SEWER	14"	CITY OF FRESNO	PROPOSED



## ADDENDUM 3 - RFP HSR 11-16

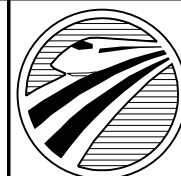
PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
STA. 11060+00 TO STA. 11075+00

SHEET NO.

DESIGNED BY C. ALLEN
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CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

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**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

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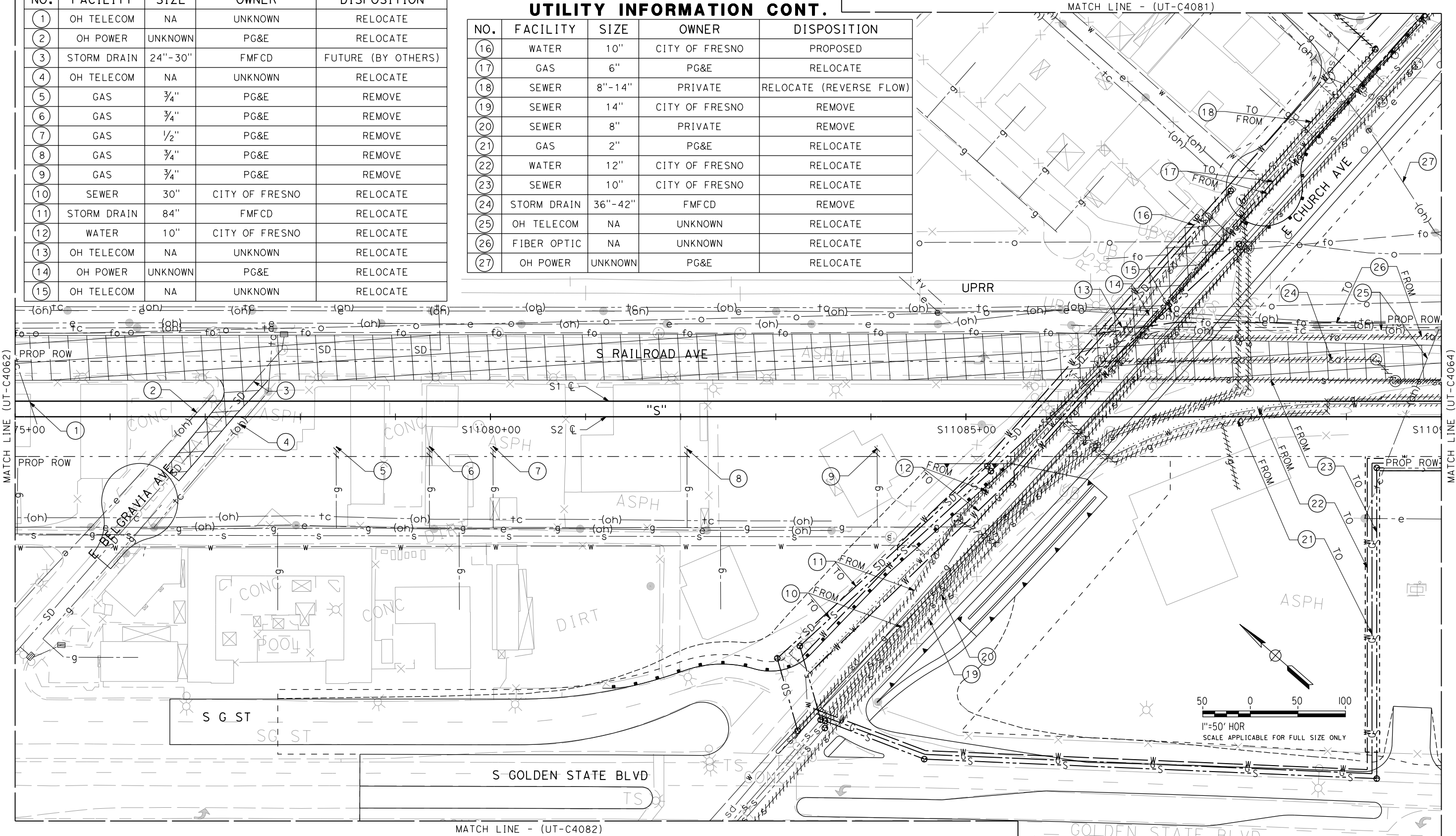


UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
1	OH TELECOM	NA	UNKNOWN	RELOCATE
2	OH POWER	UNKNOWN	PG&E	RELOCATE
3	STORM DRAIN	24"-30"	FMFCD	FUTURE (BY OTHERS)
4	OH TELECOM	NA	UNKNOWN	RELOCATE
5	GAS	3/4"	PG&E	REMOVE
6	GAS	3/4"	PG&E	REMOVE
7	GAS	1/2"	PG&E	REMOVE
8	GAS	3/4"	PG&E	REMOVE
9	GAS	3/4"	PG&E	REMOVE
10	SEWER	30"	CITY OF FRESNO	RELOCATE
11	STORM DRAIN	84"	FMFCD	RELOCATE
12	WATER	10"	CITY OF FRESNO	RELOCATE
13	OH TELECOM	NA	UNKNOWN	RELOCATE
14	OH POWER	UNKNOWN	PG&E	RELOCATE
15	OH TELECOM	NA	UNKNOWN	RELOCATE

UTILITY INFORMATION CONT.

NO.	FACILITY	SIZE	OWNER	DISPOSITION
16	WATER	10"	CITY OF FRESNO	PROPOSED
17	GAS	6"	PG&E	RELOCATE
18	SEWER	8"-14"	PRIVATE	RELOCATE (REVERSE FLOW)
19	SEWER	14"	CITY OF FRESNO	REMOVE
20	SEWER	8"	PRIVATE	REMOVE
21	GAS	2"	PG&E	RELOCATE
22	WATER	12"	CITY OF FRESNO	RELOCATE
23	SEWER	10"	CITY OF FRESNO	RELOCATE
24	STORM DRAIN	36"-42"	FMFCD	REMOVE
25	OH TELECOM	NA	UNKNOWN	RELOCATE
26	FIBER OPTIC	NA	UNKNOWN	RELOCATE
27	OH POWER	UNKNOWN	PG&E	RELOCATE



ADDENDUM 3 - RFP HSR 11-16

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C. ALLEN  
DRAWN BY  
S. KHAN  
CHECKED BY  
M. POLISCHUK  
IN CHARGE  
J. LABANOWSKI  
DATE  
06/06/12

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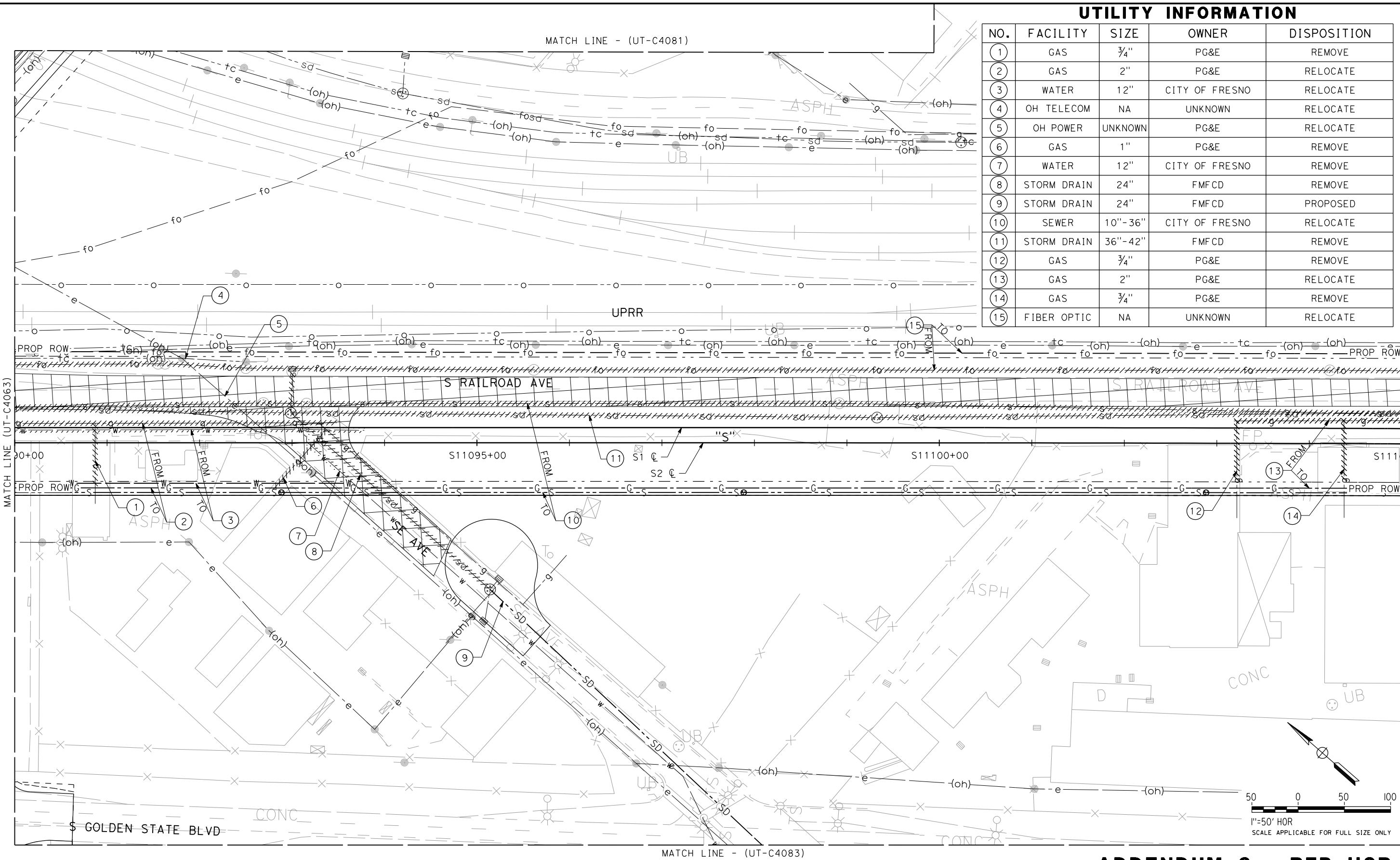


CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
E CHURCH AVE

CONTRACT NO.  
DRAWING NO.  
UT-C4063  
SCALE  
AS SHOWN  
SHEET NO.

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**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
STA. 11090+00 TO STA. 11105+00

CONTRACT NO.
DRAWING NO. UT-C4064
SCALE AS SHOWN
SHEET NO.

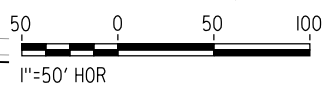
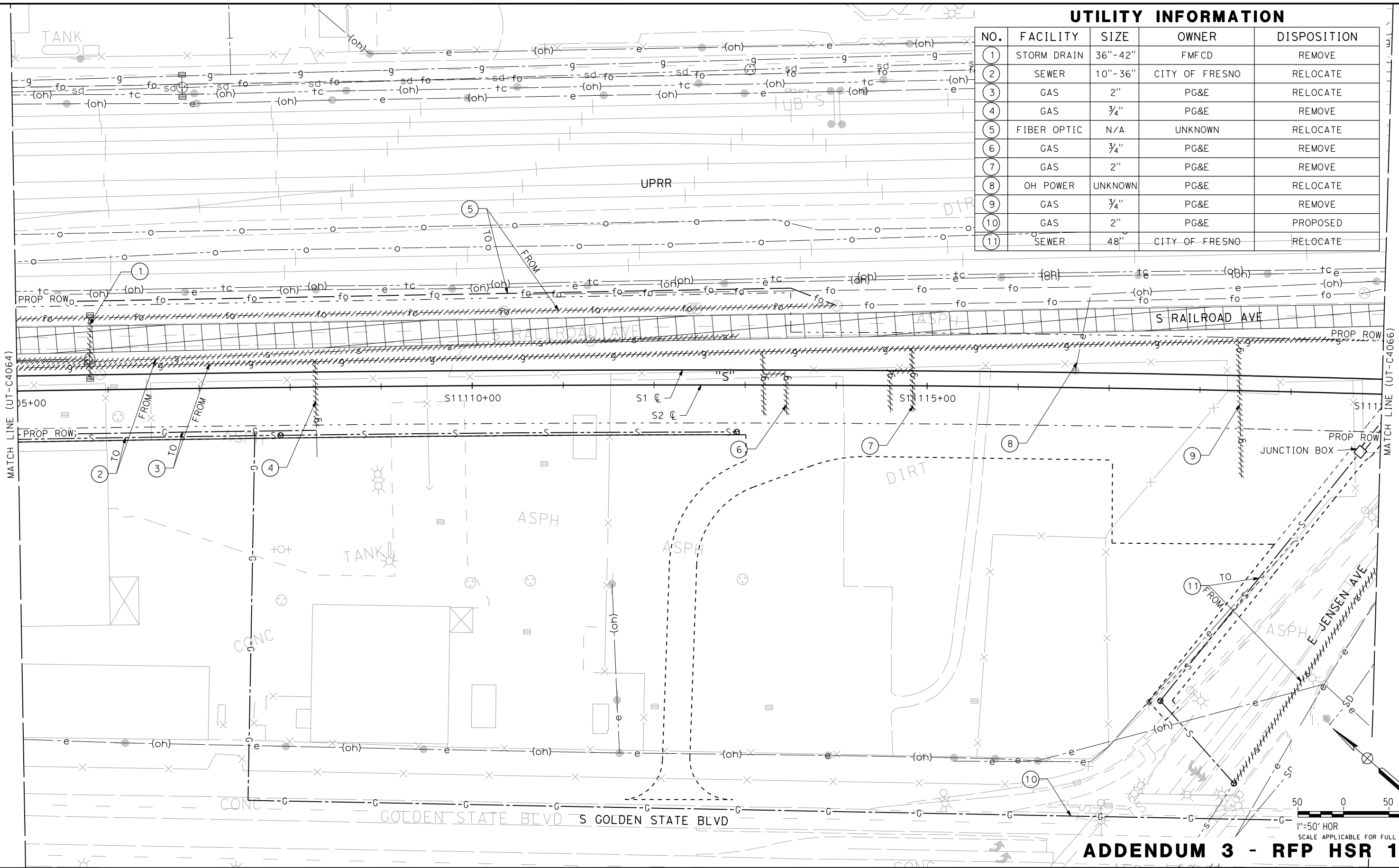
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UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
1	STORM DRAIN	36"-42"	FMFCD	REMOVE
2	SEWER	10"-36"	CITY OF FRESNO	RELOCATE
3	GAS	2"	PG&E	RELOCATE
4	GAS	3/4"	PG&E	REMOVE
5	FIBER OPTIC	N/A	UNKNOWN	RELOCATE
6	GAS	3/4"	PG&E	REMOVE
7	GAS	2"	PG&E	REMOVE
8	OH POWER	UNKNOWN	PG&E	RELOCATE
9	GAS	3/4"	PG&E	REMOVE
10	GAS	2"	PG&E	PROPOSED
11	SEWER	48"	CITY OF FRESNO	RELOCATE



ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

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IN CHARGE J. LABANOWSKI
DATE 06/06/12

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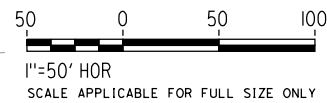
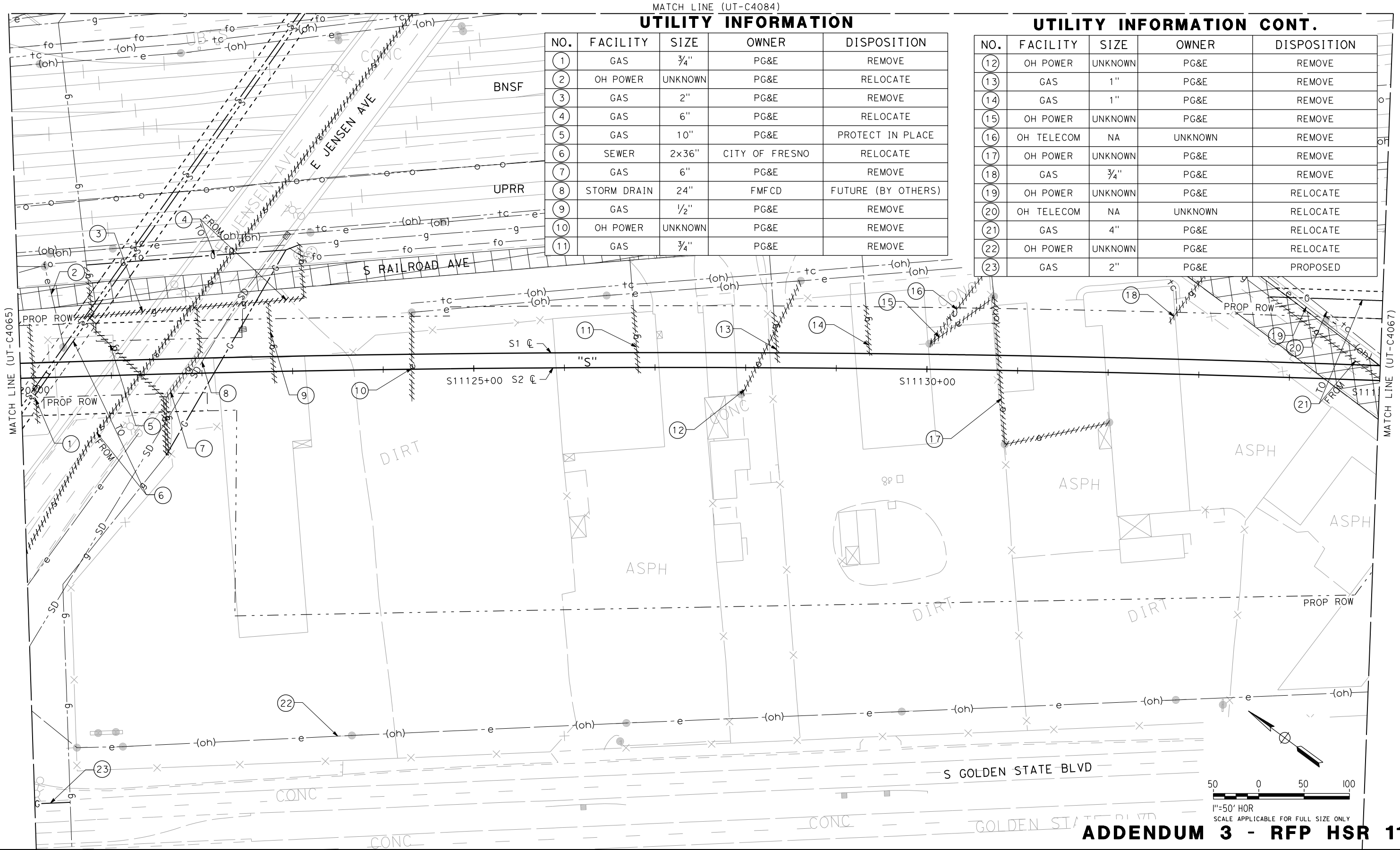


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
STA. 11105+00 TO STA. 11120+00

CONTRACT NO.
DRAWING NO. UT-C4065
SCALE AS SHOWN
SHEET NO.

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REV	DATE	BY	CHK	APP	DESCRIPTION

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DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

**PROPOSED  
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DESIGN**

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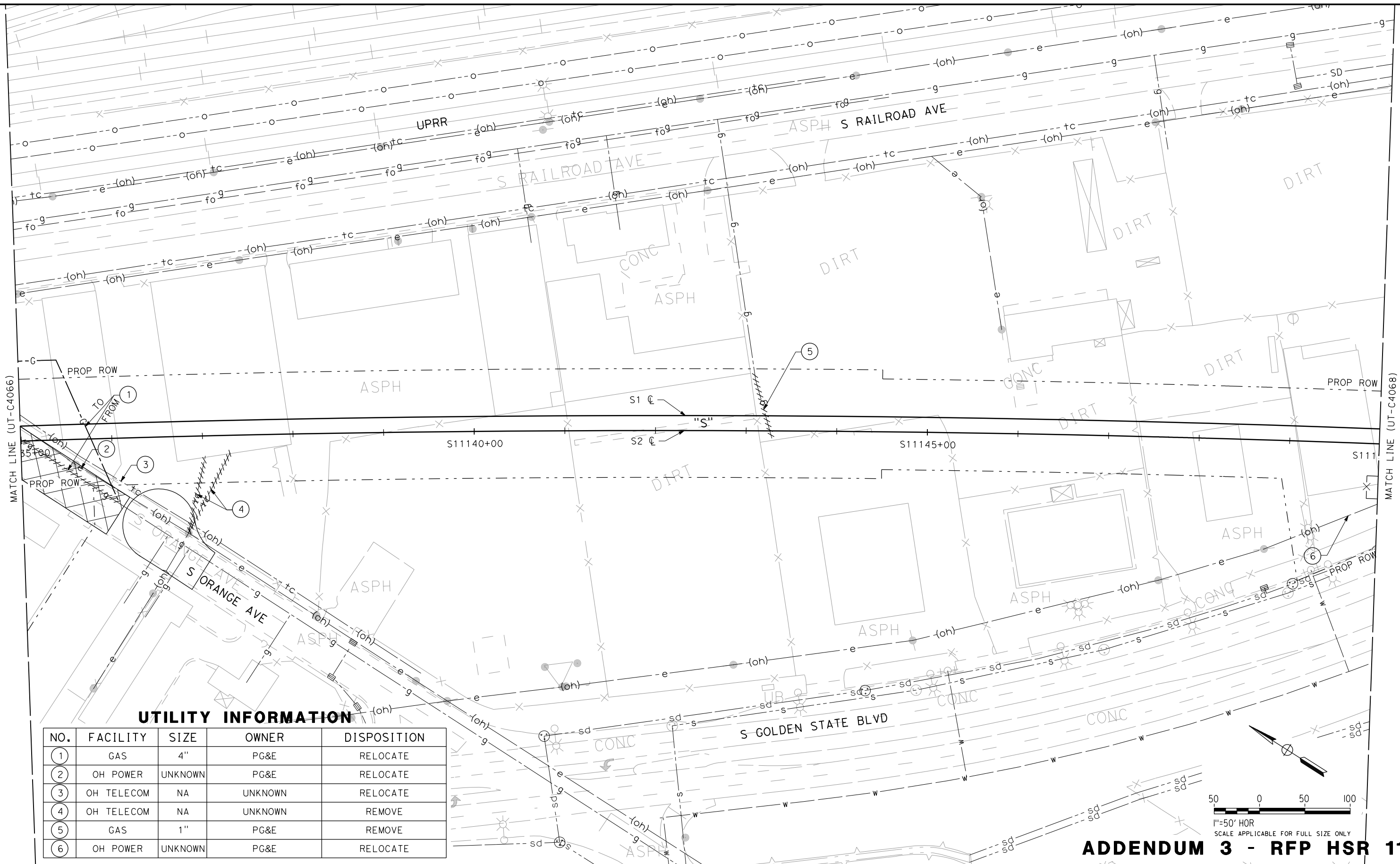
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
STA. 11120+00 TO STA. 11135+00

CONTRACT NO.
DRAWING NO. UT-C4066
SCALE AS SHOWN
SHEET NO.



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**UTILITY INFORMATION**

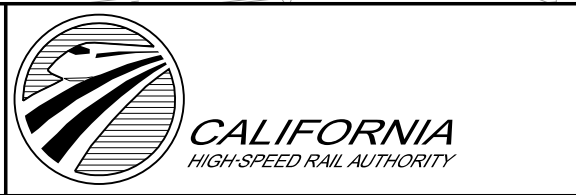
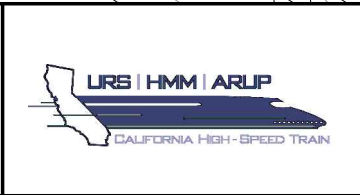
NO.	FACILITY	SIZE	OWNER	DISPOSITION
①	GAS	4"	PG&E	RELOCATE
②	OH POWER	UNKNOWN	PG&E	RELOCATE
③	OH TELECOM	NA	UNKNOWN	RELOCATE
④	OH TELECOM	NA	UNKNOWN	REMOVE
⑤	GAS	1"	PG&E	REMOVE
⑥	OH POWER	UNKNOWN	PG&E	RELOCATE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

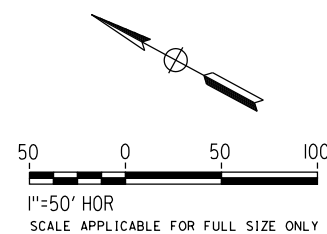
**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
STA. 11135+00 TO STA. 11150+00

CONTRACT NO.
DRAWING NO. UT-C4067
SCALE AS SHOWN
SHEET NO.



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**SIERRA SUBDIVISION**  
 PACKAGE 1C  
 UTILITIES  
 COMPOSITE UTILITY PLAN  
 STA. 11150+00 TO STA. 11165+00

CONTRACT NO.
DRAWING NO. UT-C4068
SCALE AS SHOWN
SHEET NO.

NO.	FACILITY	SIZE	OWNER	DISPOSITION
①	OH POWER	UNKNOWN	PG&E	RELOCATE
②	STORM DRAIN	24" - 36"	FMFCD	RELOCATE
③	SEWER	8"	CITY OF FRESNO	RELOCATE
④	STORM DRAIN	UNKNOWN	FMFCD	FUTURE (BY OTHERS)
⑤	WATER	14"	CITY OF FRESNO	RELOCATE
⑥	STORM DRAIN	42"	FID	RELOCATE
⑦	STORM DRAIN	48"	FID	RELOCATE
⑧	OH POWER	UNKNOWN	PG&E	RELOCATE

**PROPOSED  
PRELIMINARY  
DESIGN**

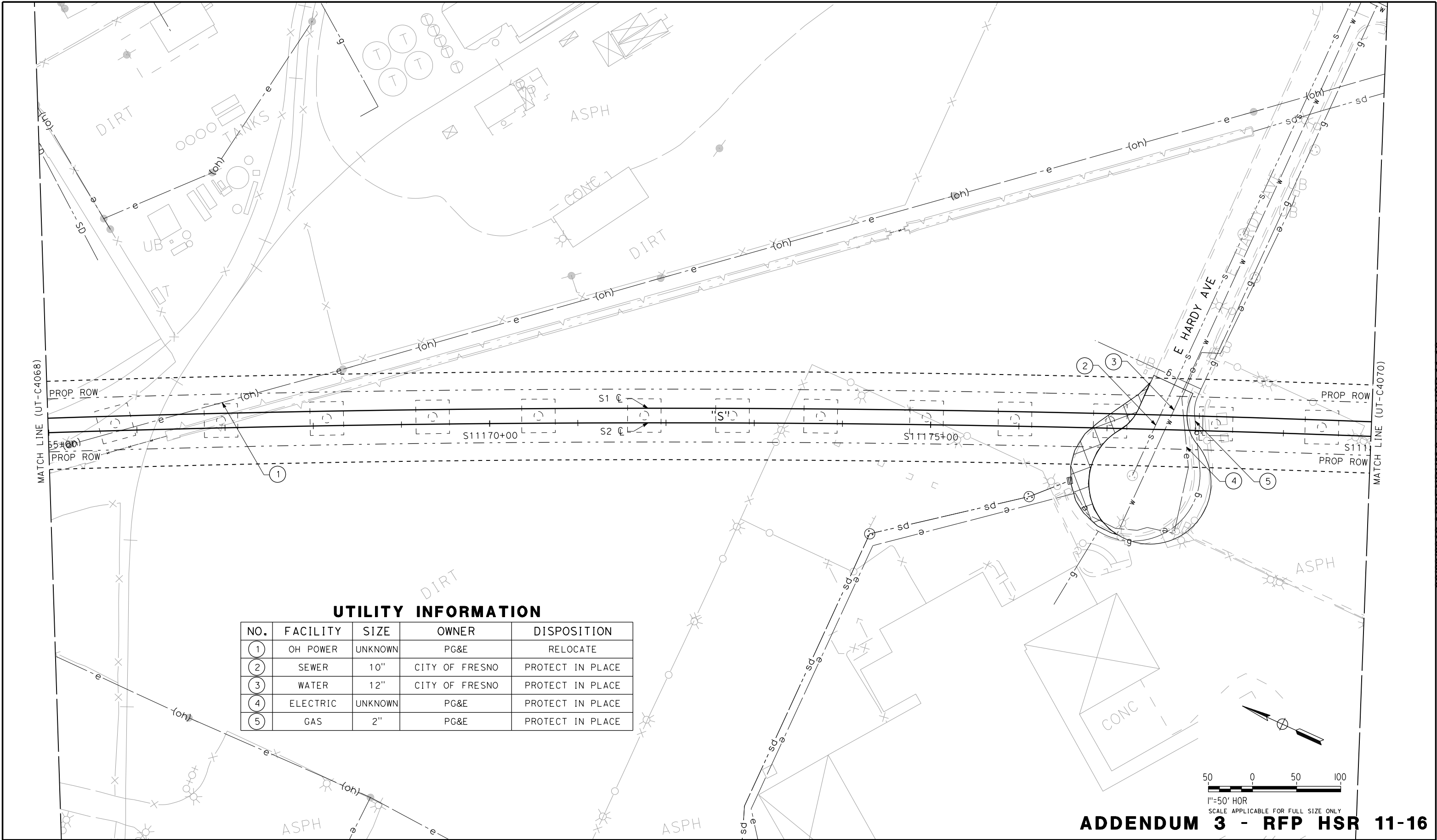
**NOT FOR  
CONSTRUCTION**



DESIGNED BY	C. ALLEN
DRAWN BY	S. KHAN
CHECKED BY	M. POLISCHUK
IN CHARGE	J. LABANOWSKI
DATE	06/06/12

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DESIGNED BY  
C. ALLEN  
DRAWN BY  
S. KHAN  
CHECKED BY  
M. POLISCHUK  
IN CHARGE  
J. LABANOWSKI  
DATE  
06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

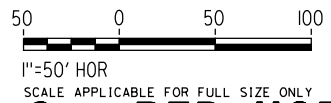
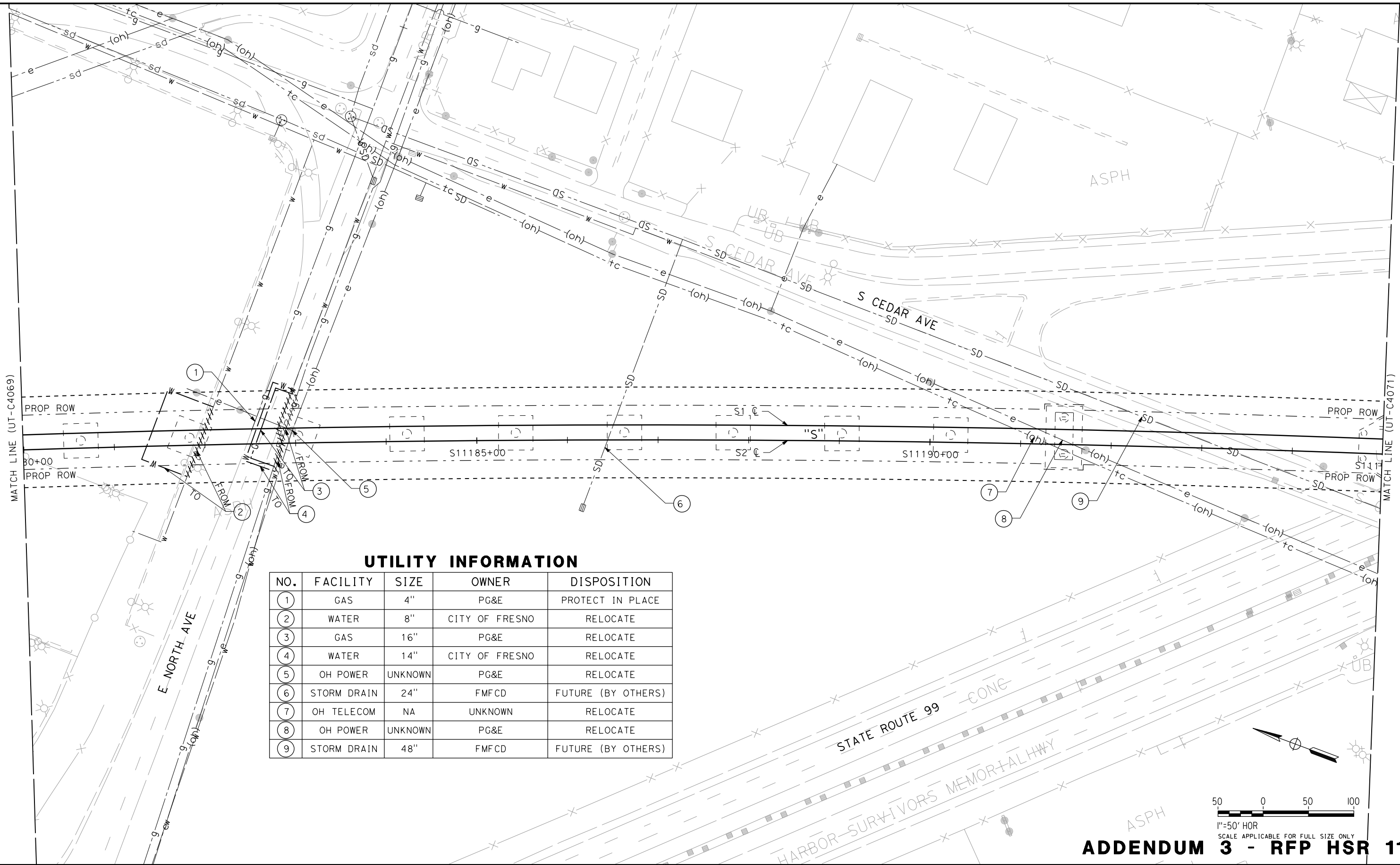


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
STA. 11165+00 TO STA. 11180+00

CONTRACT NO.  
DRAWING NO.  
UT-C4069  
SCALE  
AS SHOWN  
SHEET NO.



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## ADDENDUM 3 - RFP HSR 11-16

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DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
STA. 11180+00 TO STA. 11195+00

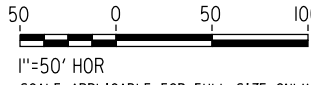
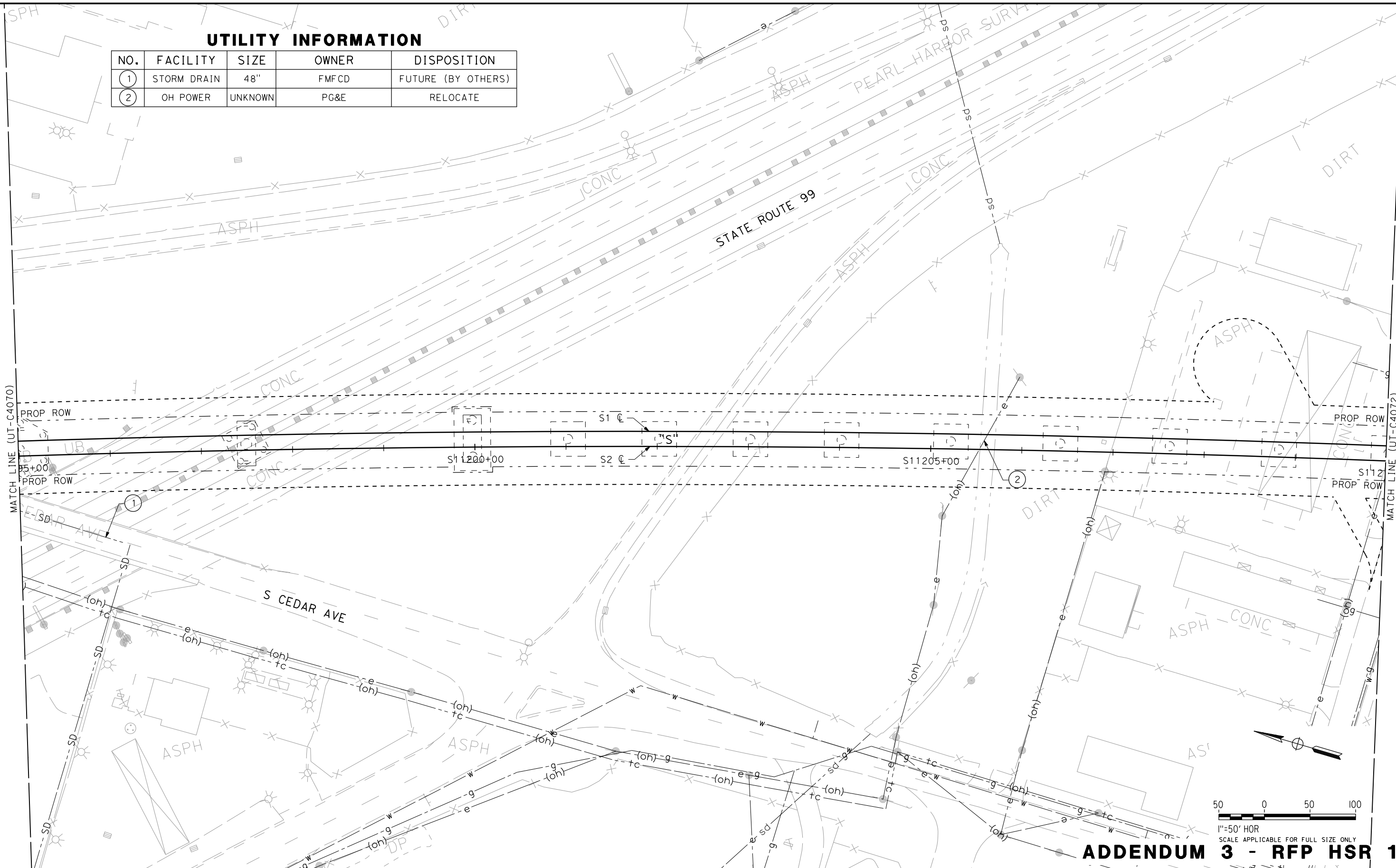
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DRAWING NO. UT-C4070
SCALE AS SHOWN
SHEET NO.



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UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
①	STORM DRAIN	48"	FMCD	FUTURE (BY OTHERS)
②	OH POWER	UNKNOWN	PG&E	RELOCATE



ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

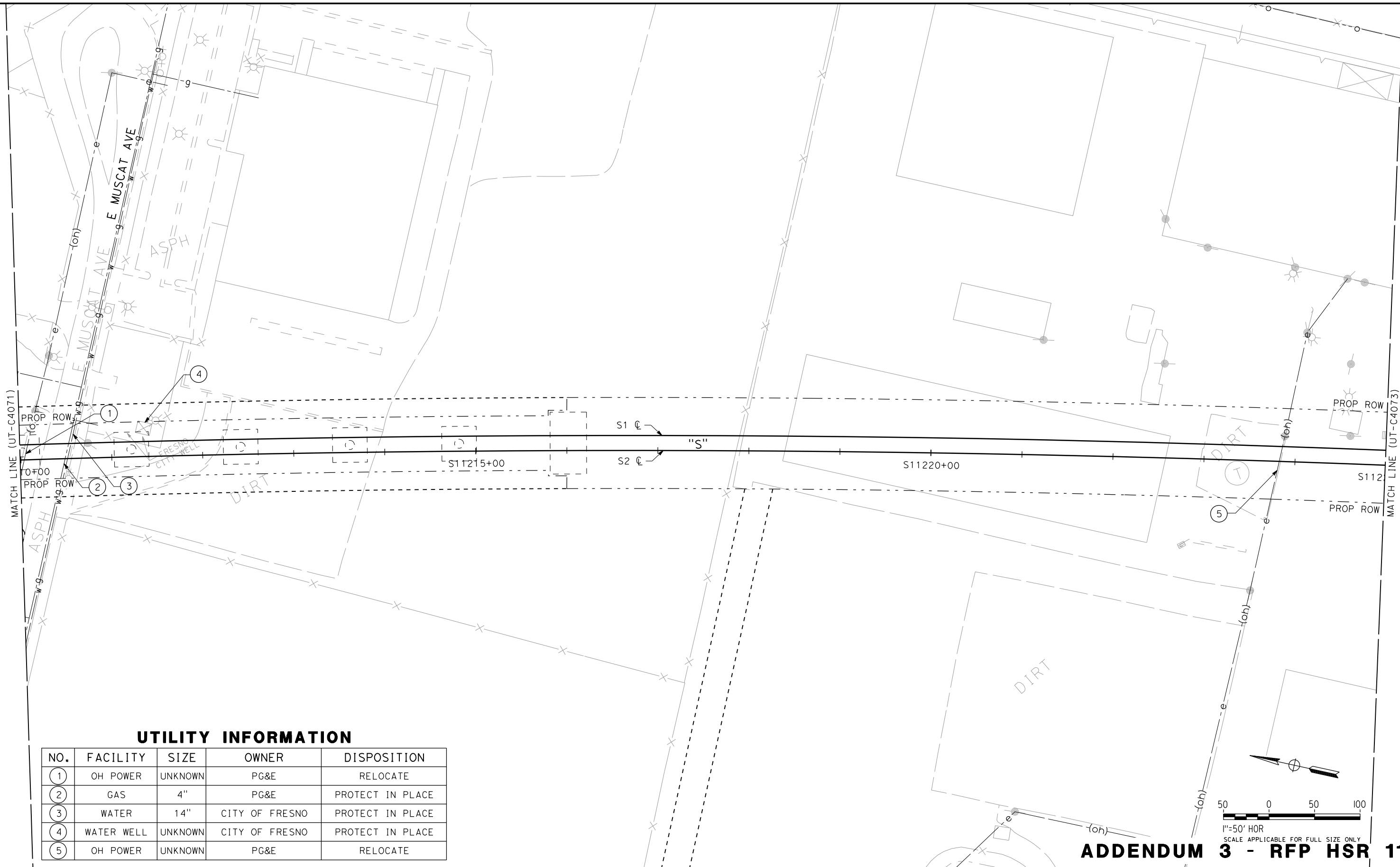


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
STA. 11195+00 TO STA. 11210+00

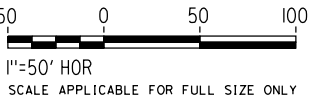
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DRAWING NO. UT-C4071
SCALE AS SHOWN
SHEET NO.

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UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
1	OH POWER	UNKNOWN	PG&E	RELOCATE
2	GAS	4"	PG&E	PROTECT IN PLACE
3	WATER	14"	CITY OF FRESNO	PROTECT IN PLACE
4	WATER WELL	UNKNOWN	CITY OF FRESNO	PROTECT IN PLACE
5	OH POWER	UNKNOWN	PG&E	RELOCATE



ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

PROPOSED  
PRELIMINARY  
DESIGN

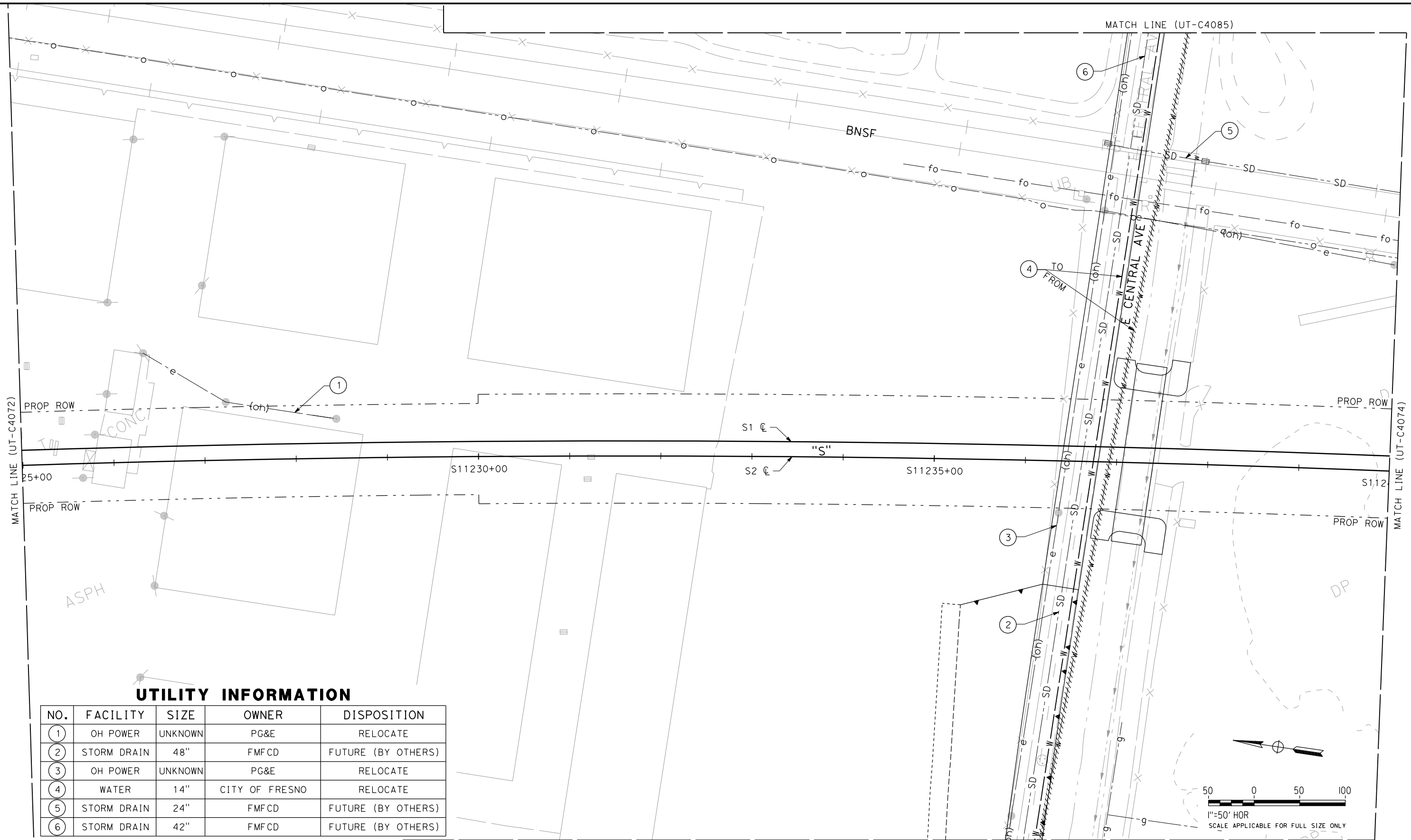
NOT FOR  
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
STA. 11210+00 TO STA. 11225+00

CONTRACT NO.
DRAWING NO. UT-C4072
SCALE AS SHOWN
SHEET NO.

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UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
①	OH POWER	UNKNOWN	PG&E	RELOCATE
②	STORM DRAIN	48"	FMFCD	FUTURE (BY OTHERS)
③	OH POWER	UNKNOWN	PG&E	RELOCATE
④	WATER	14"	CITY OF FRESNO	RELOCATE
⑤	STORM DRAIN	24"	FMFCD	FUTURE (BY OTHERS)
⑥	STORM DRAIN	42"	FMFCD	FUTURE (BY OTHERS)

ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

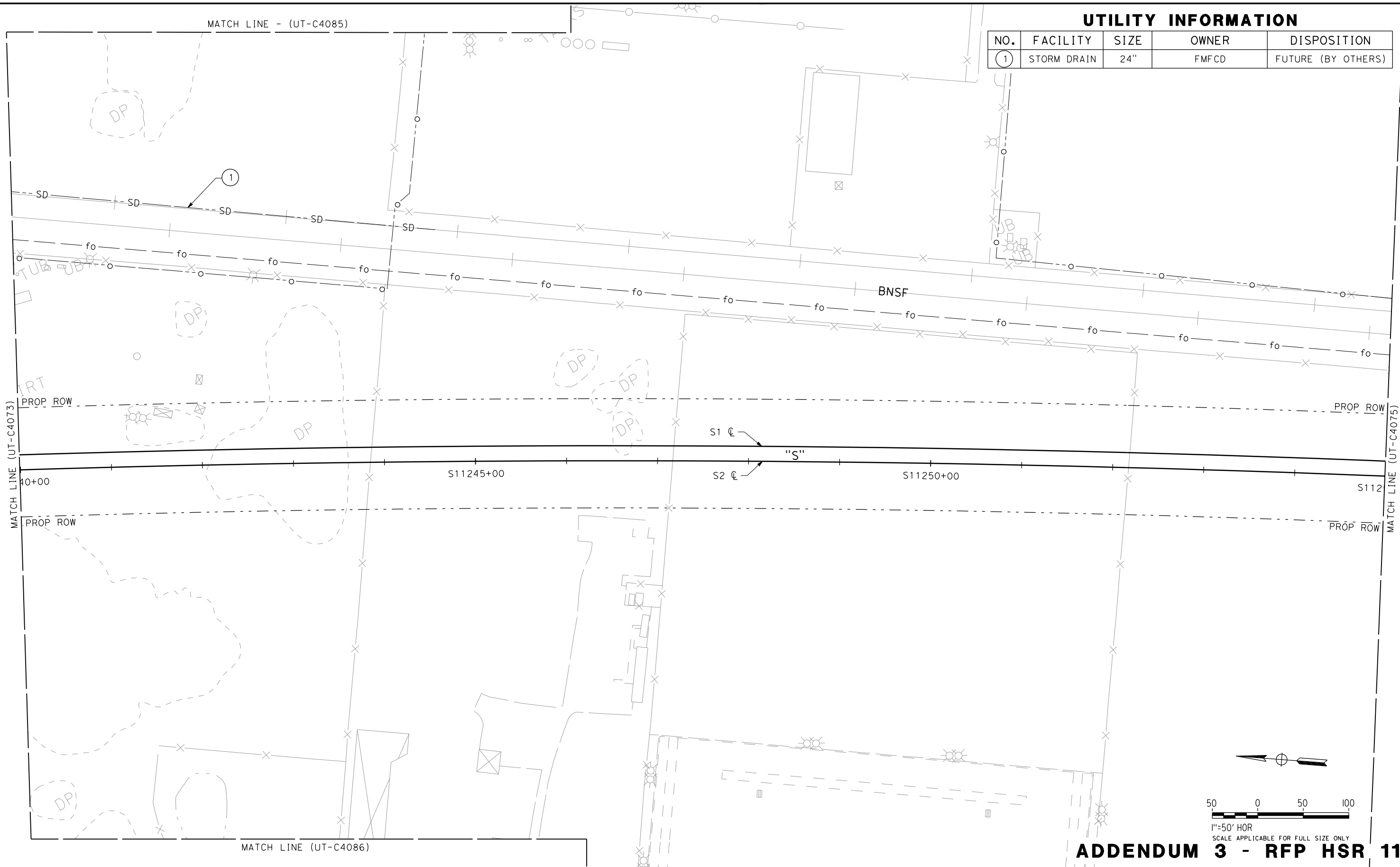
PROPOSED  
PRELIMINARY  
DESIGN  
  
NOT FOR  
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
E CENTRAL AVE

CONTRACT NO.
DRAWING NO. UT-C4073
SCALE AS SHOWN
SHEET NO.

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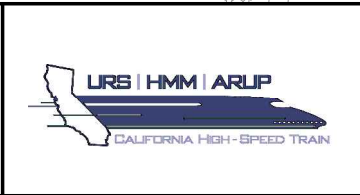


REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
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CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

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PRELIMINARY  
DESIGN**

**NOT FOR  
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**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

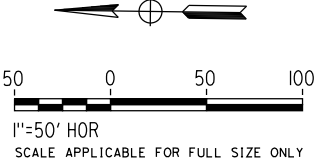
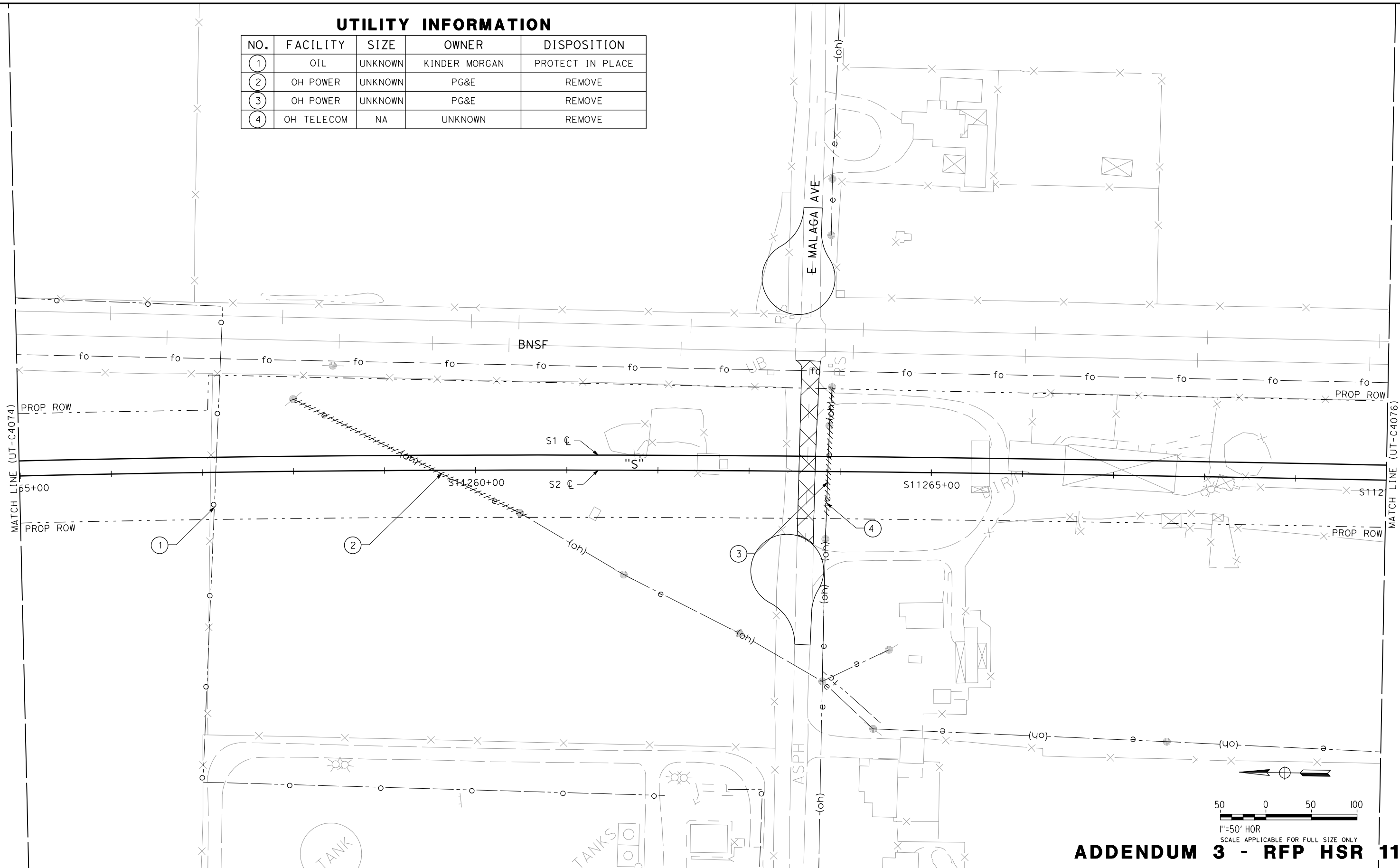
PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
STA. 11240+00 TO STA. 11255+00

CONTRACT NO.
DRAWING NO. UT-C4074
SCALE AS SHOWN
SHEET NO.



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UTILITY INFORMATION				
NO.	FACILITY	SIZE	OWNER	DISPOSITION
①	OIL	UNKNOWN	KINDER MORGAN	PROTECT IN PLACE
②	OH POWER	UNKNOWN	PG&E	REMOVE
③	OH POWER	UNKNOWN	PG&E	REMOVE
④	OH TELECOM	NA	UNKNOWN	REMOVE



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
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CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

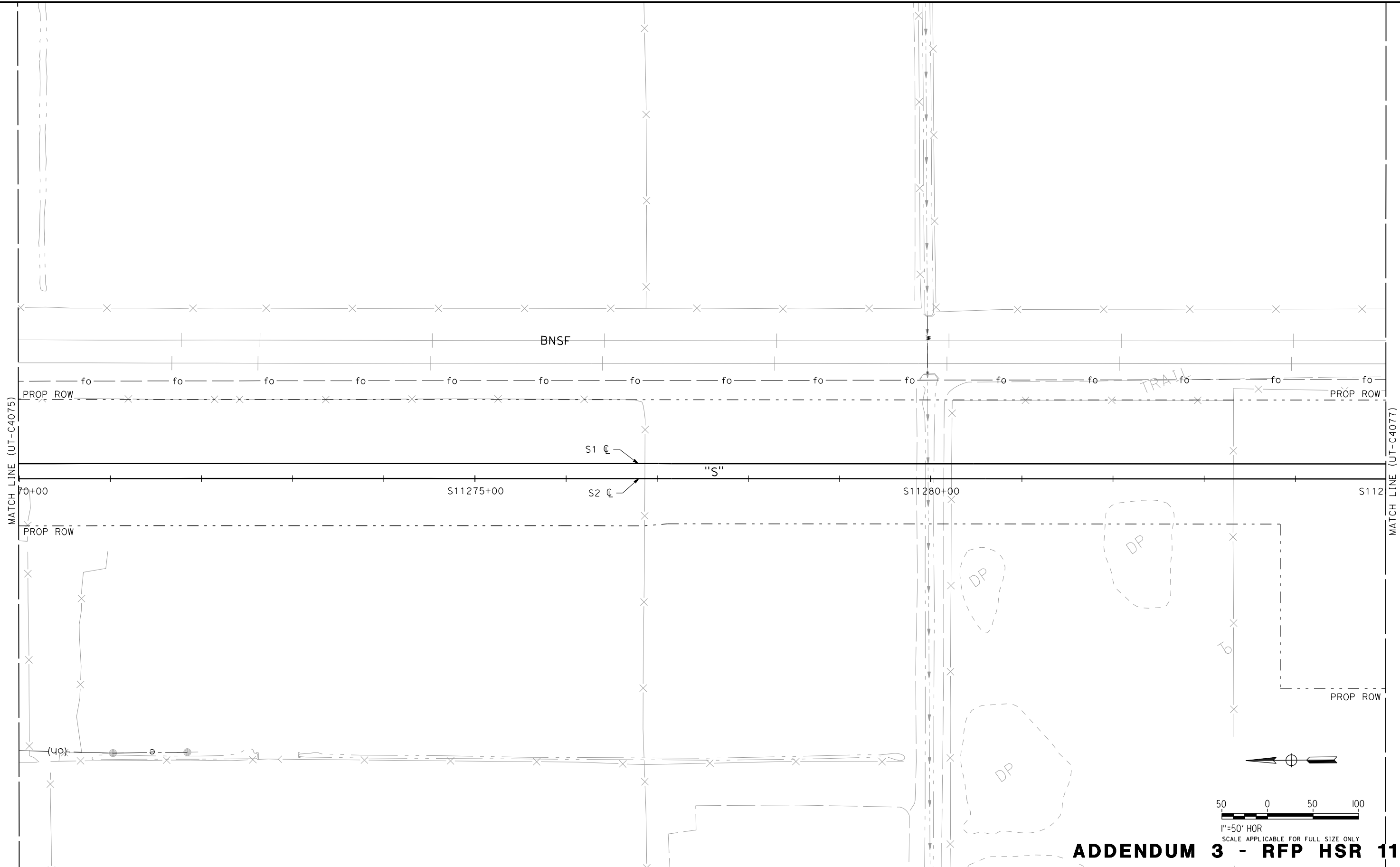


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
STA. 11255+00 TO STA. 11270+00

CONTRACT NO.
DRAWING NO. UT-C4075
SCALE AS SHOWN
SHEET NO.

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CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

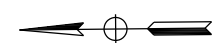
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UTILITIES  
COMPOSITE UTILITY PLAN  
STA. 11270+00 TO STA. 11285+00

CONTRACT NO.
DRAWING NO. UT-C4076
SCALE AS SHOWN
SHEET NO.



NO.	FACILITY	SIZE	OWNER	DISPOSITION
①	OH POWER	UNKNOWN	PG&E	RELOCATE
②	OH TELECOM	NA	UNKNOWN	RELOCATE
③	OH POWER	UNKNOWN	PG&E	RELOCATE

TRAIL

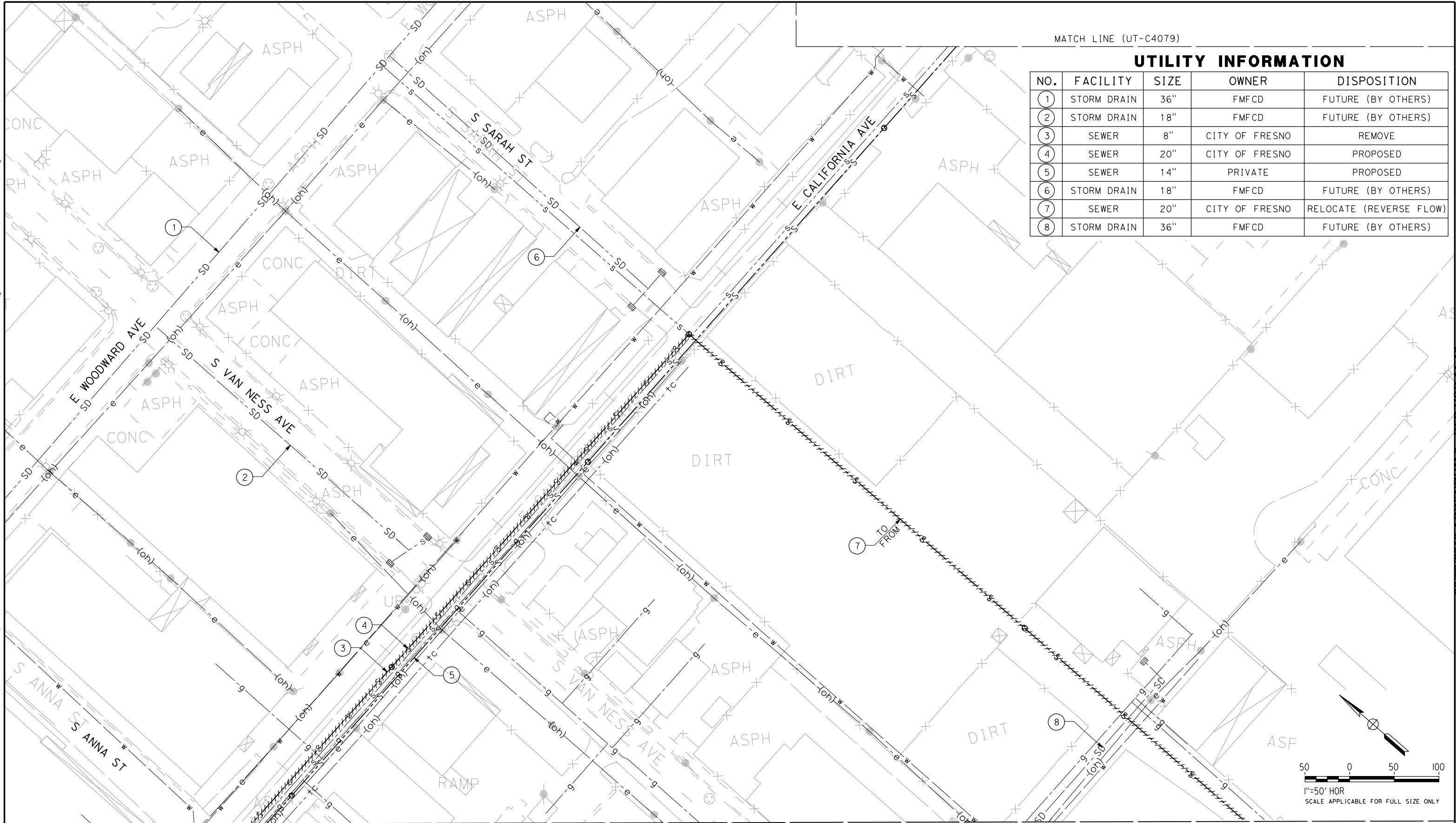


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SCALE APPLICABLE FOR FULL SIZE ONLY

**ADDENDUM 3 - RFP HSR 11-16**

CONTRACT NO.
DRAWING NO. UT-C4077
SCALE AS SHOWN
SHEET NO.

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MATCH LINE (UT-C4079)

UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
①	STORM DRAIN	36"	FMFCD	FUTURE (BY OTHERS)
②	STORM DRAIN	18"	FMFCD	FUTURE (BY OTHERS)
③	SEWER	8"	CITY OF FRESNO	REMOVE
④	SEWER	20"	CITY OF FRESNO	PROPOSED
⑤	SEWER	14"	PRIVATE	PROPOSED
⑥	STORM DRAIN	18"	FMFCD	FUTURE (BY OTHERS)
⑦	SEWER	20"	CITY OF FRESNO	RELOCATE (REVERSE FLOW)
⑧	STORM DRAIN	36"	FMFCD	FUTURE (BY OTHERS)

MATCH LINE (UT-C4061)

MATCH LINE (UT-C4062)

ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
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IN CHARGE J. LABANOWSKI
DATE 06/06/12

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PRELIMINARY  
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CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
E CALIFORNIA AVE

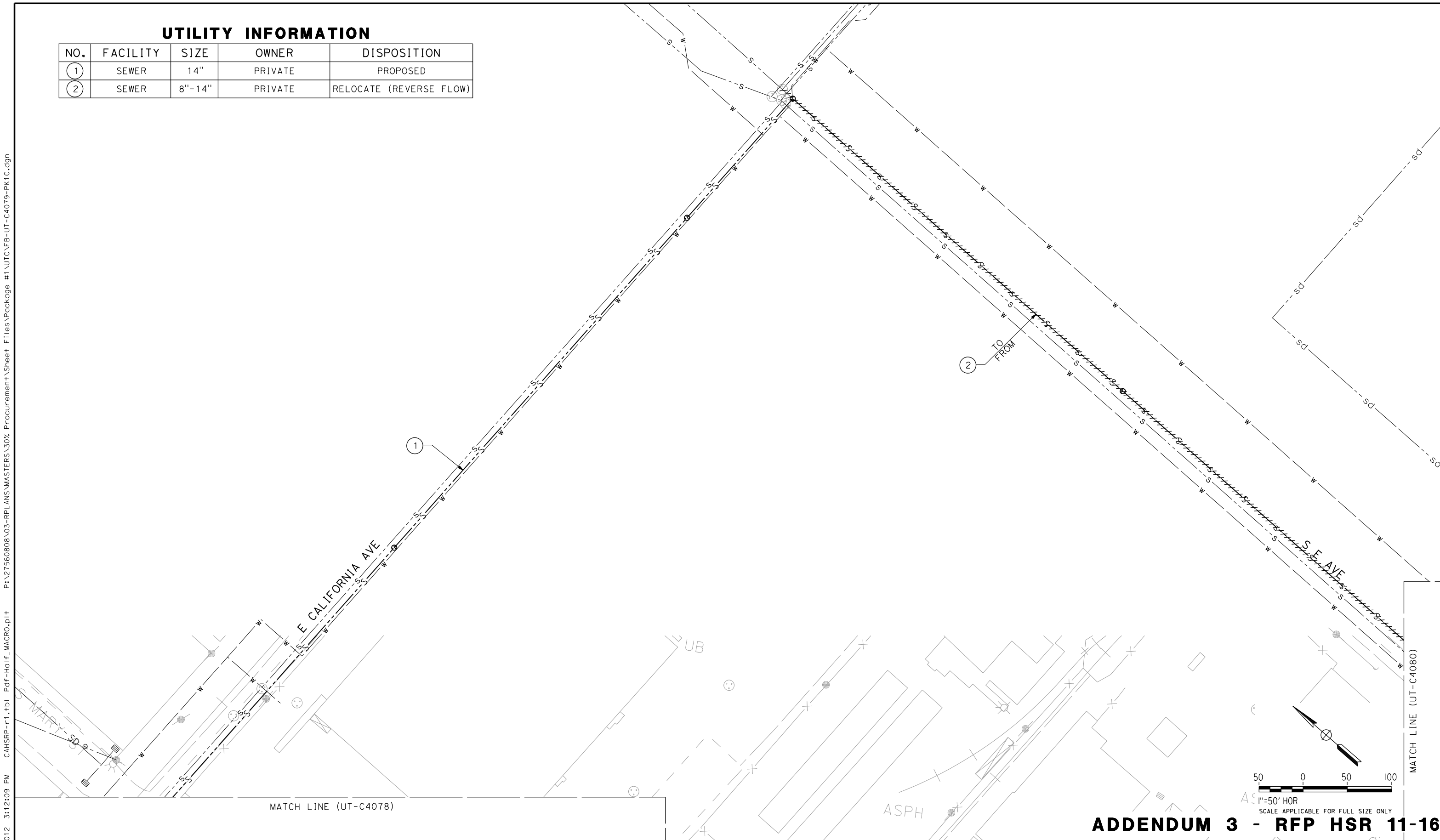
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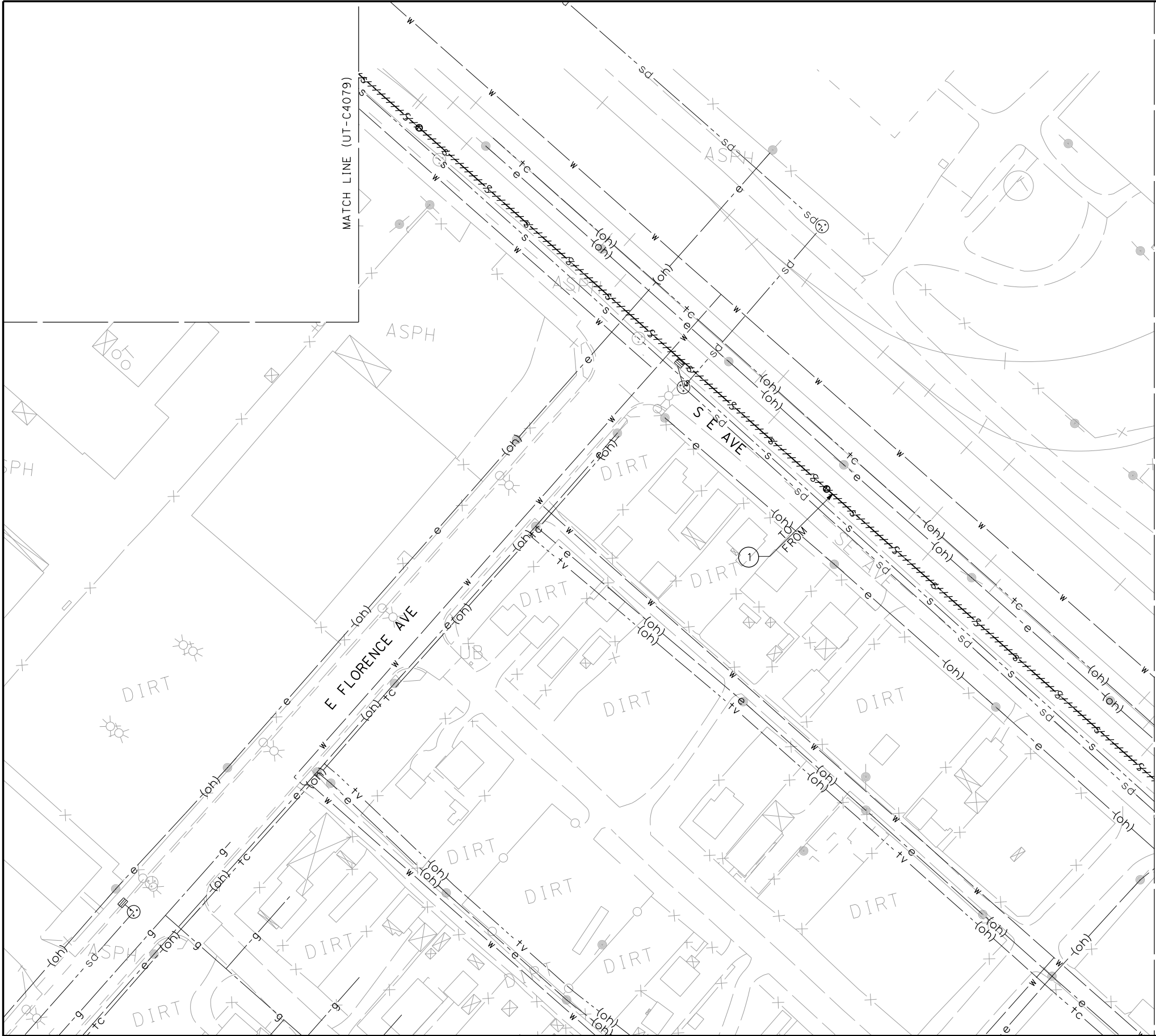
UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
1	SEWER	14"	PRIVATE	PROPOSED
2	SEWER	8"-14"	PRIVATE	RELOCATE (REVERSE FLOW)



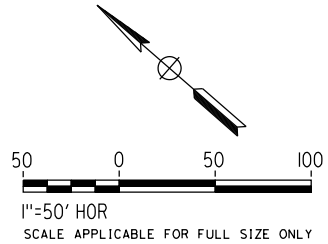
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REV	DATE	BY	CHK	APP	DESCRIPTION																																								

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carlton\_allen 6/5/2012 3:12:10 PM



UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
①	SEWER	8"-14"	PRIVATE	RELOCATE (REVERSE FLOW)



ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

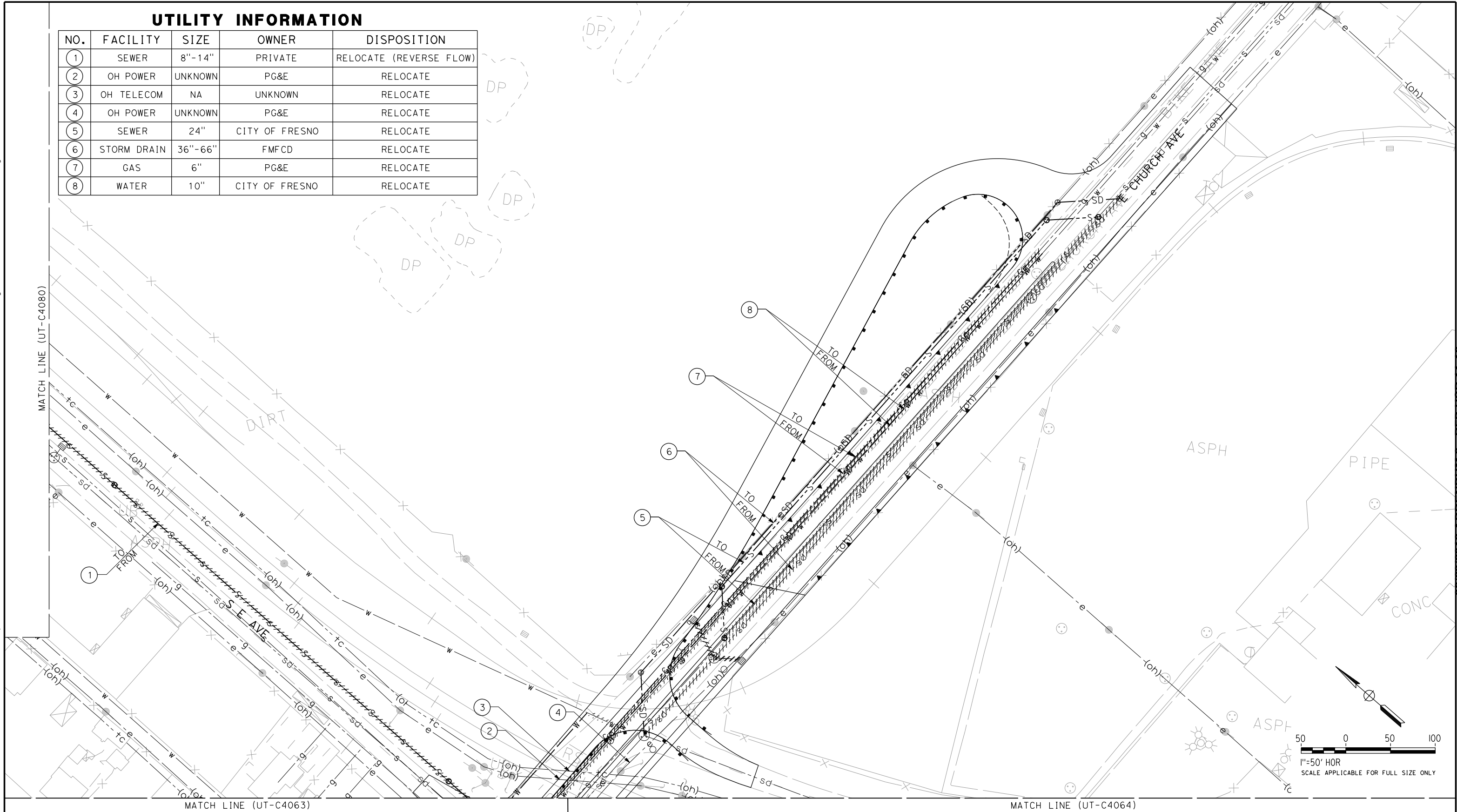
PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
S E AVE

CONTRACT NO.
DRAWING NO. UT-C4080
SCALE AS SHOWN
SHEET NO.

carlton\_allen 6/5/2012 3:12:12 PM CAHSR-r1.tbl Pdf-Half\_MACRO.plt P:\27560808\03-RPLANS\MASTERS\30% Procurement\Sheet Files\Package #1\UTC\FB-UT-C4081-PK1C.dgn

UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
1	SEWER	8"-14"	PRIVATE	RELOCATE (REVERSE FLOW)
2	OH POWER	UNKNOWN	PG&E	RELOCATE
3	OH TELECOM	NA	UNKNOWN	RELOCATE
4	OH POWER	UNKNOWN	PG&E	RELOCATE
5	SEWER	24"	CITY OF FRESNO	RELOCATE
6	STORM DRAIN	36"-66"	FMFCD	RELOCATE
7	GAS	6"	PG&E	RELOCATE
8	WATER	10"	CITY OF FRESNO	RELOCATE



ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



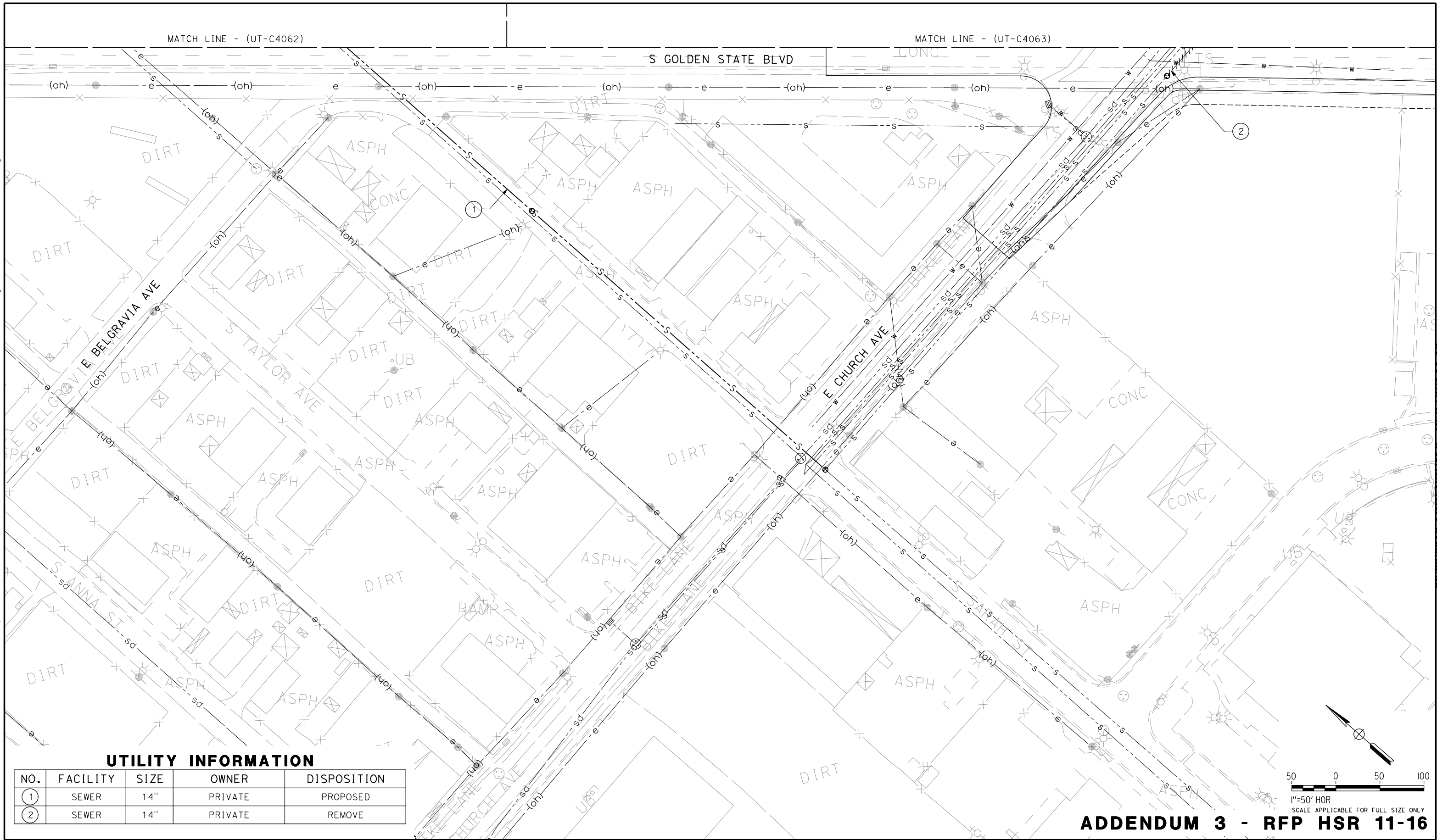
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
E CHURCH AVE

CONTRACT NO.
DRAWING NO. UT-C4081
SCALE AS SHOWN
SHEET NO.



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carlton\_allen 6/5/2012 3:12:13 PM



### UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
①	SEWER	14"	PRIVATE	PROPOSED
②	SEWER	14"	PRIVATE	REMOVE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

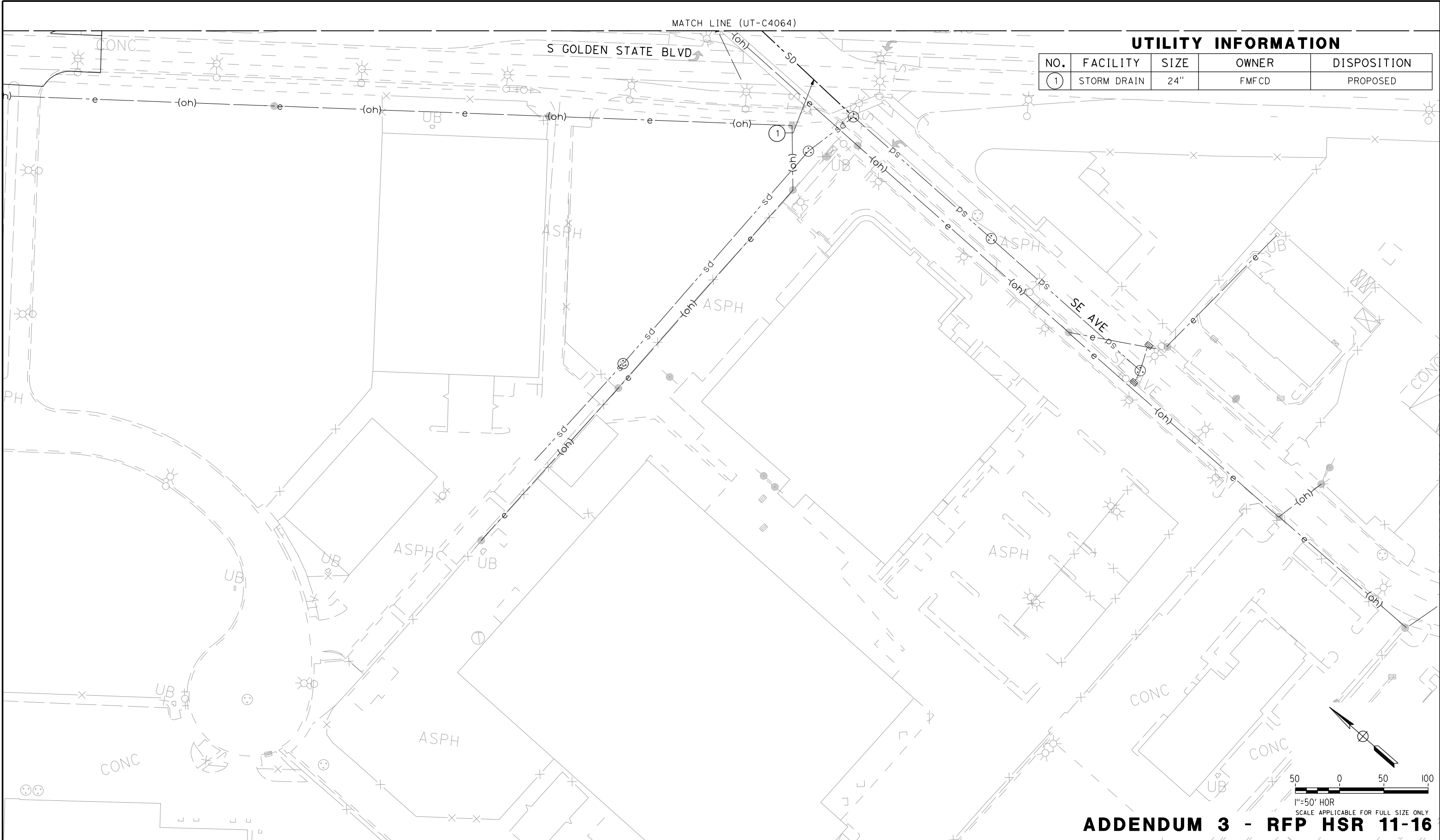


<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b>	
PACKAGE 1C UTILITIES COMPOSITE UTILITY PLAN E CHURCH AVE	
CONTRACT NO.	
DRAWING NO.	UT-C4082
SCALE	AS SHOWN
SHEET NO.	

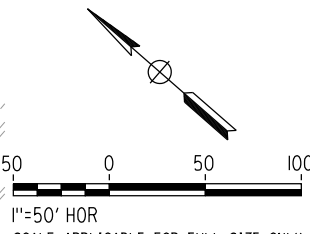
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carlton\_allen



UTILITY INFORMATION				
NO.	FACILITY	SIZE	OWNER	DISPOSITION
1	STORM DRAIN	24"	FMFCD	PROPOSED



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



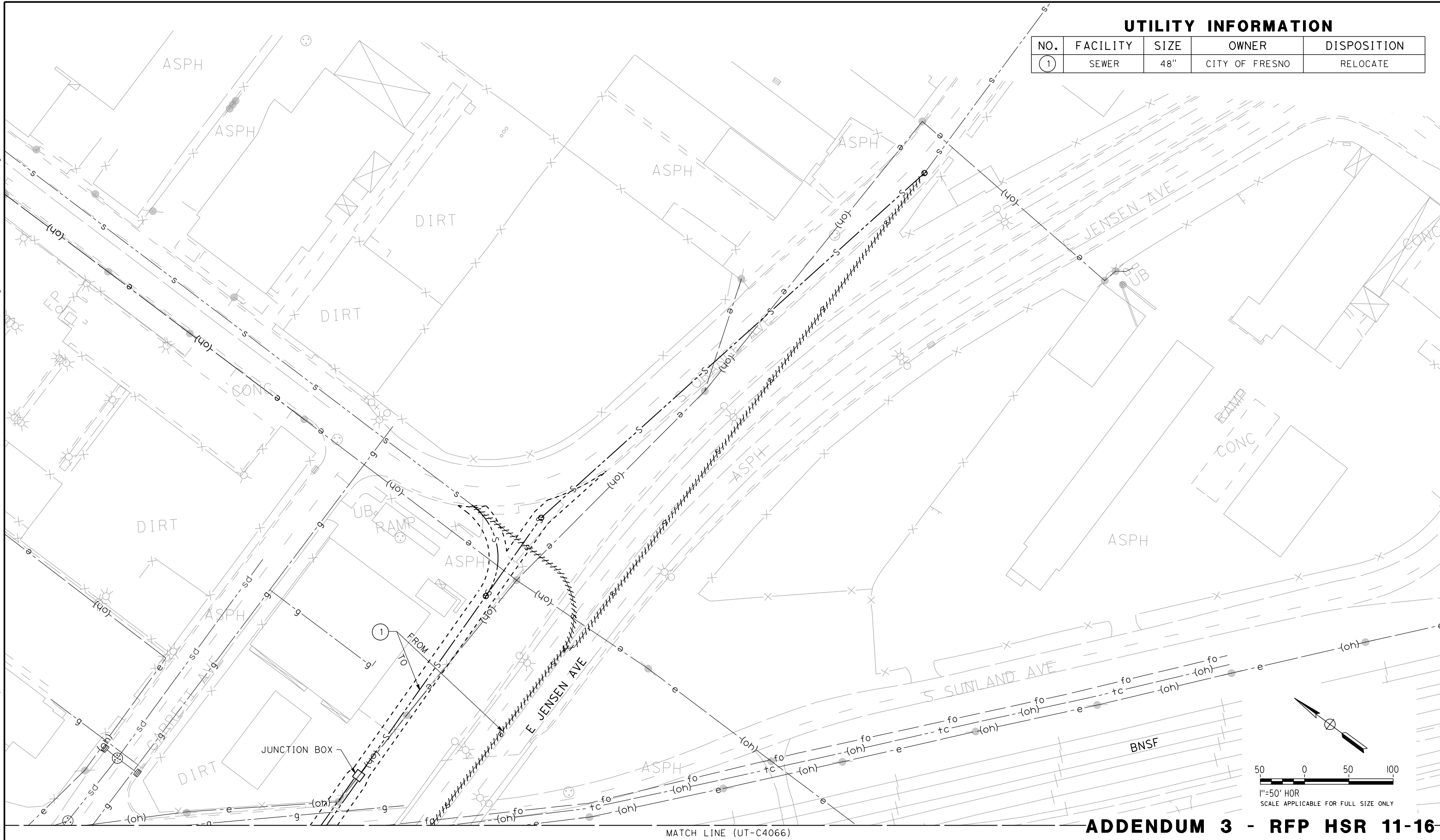
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
S E AVE

CONTRACT NO.
DRAWING NO. UT-C4083
SCALE AS SHOWN
SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16

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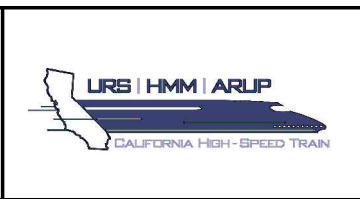


REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
E JENSEN AVE

CONTRACT NO.
DRAWING NO. UT-C4084
SCALE AS SHOWN
SHEET NO.

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6/5/2012 3:12:16 PM  
carlton\_allen

UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
1	WATER	14"	CITY OF FRESNO	RELOCATE
2	STORM DRAIN	42"	FMFCD	FUTURE (BY OTHERS)



MATCH LINE - (UT-C4073)

MATCH LINE - (UT-C4074)

ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

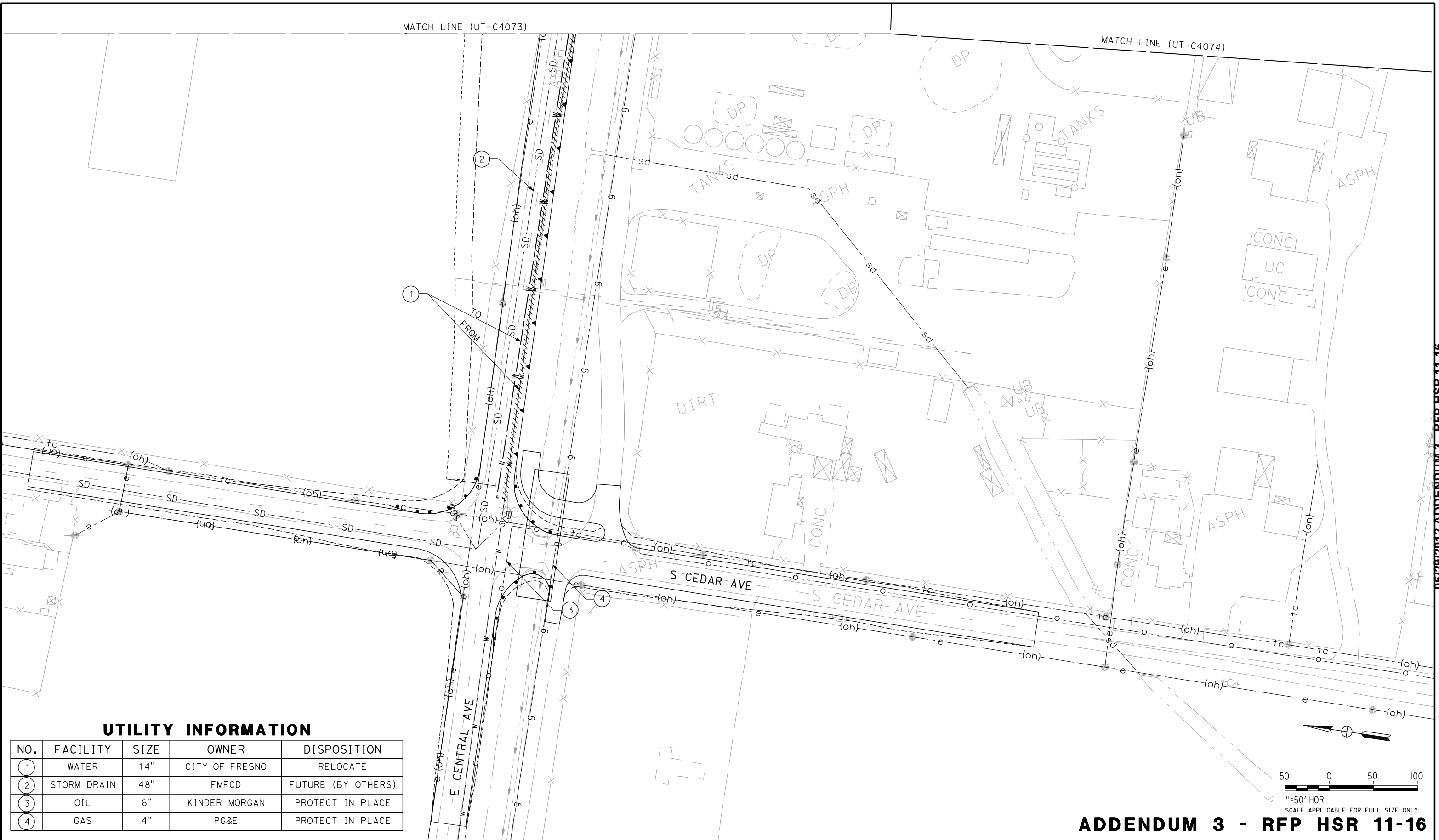
DESIGNED BY C. ALLEN
DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

PROPOSED  
PRELIMINARY  
DESIGN  
  
NOT FOR  
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION  
PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
E CENTRAL AVE

CONTRACT NO.
DRAWING NO. UT-C4085
SCALE AS SHOWN
SHEET NO.



## UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
①	WATER	14"	CITY OF FRESNO	RELOCATE
②	STORM DRAIN	48"	FMFCD	FUTURE (BY OTHERS)
③	OIL	6"	KINDER MORGAN	PROTECT IN PLACE
④	GAS	4"	PG&E	PROTECT IN PLACE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY	C. ALLEN
DRAWN BY	S. KHAN
CHECKED BY	M. POLISCHUK
IN CHARGE	J. LABANOWSKI
DATE	06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

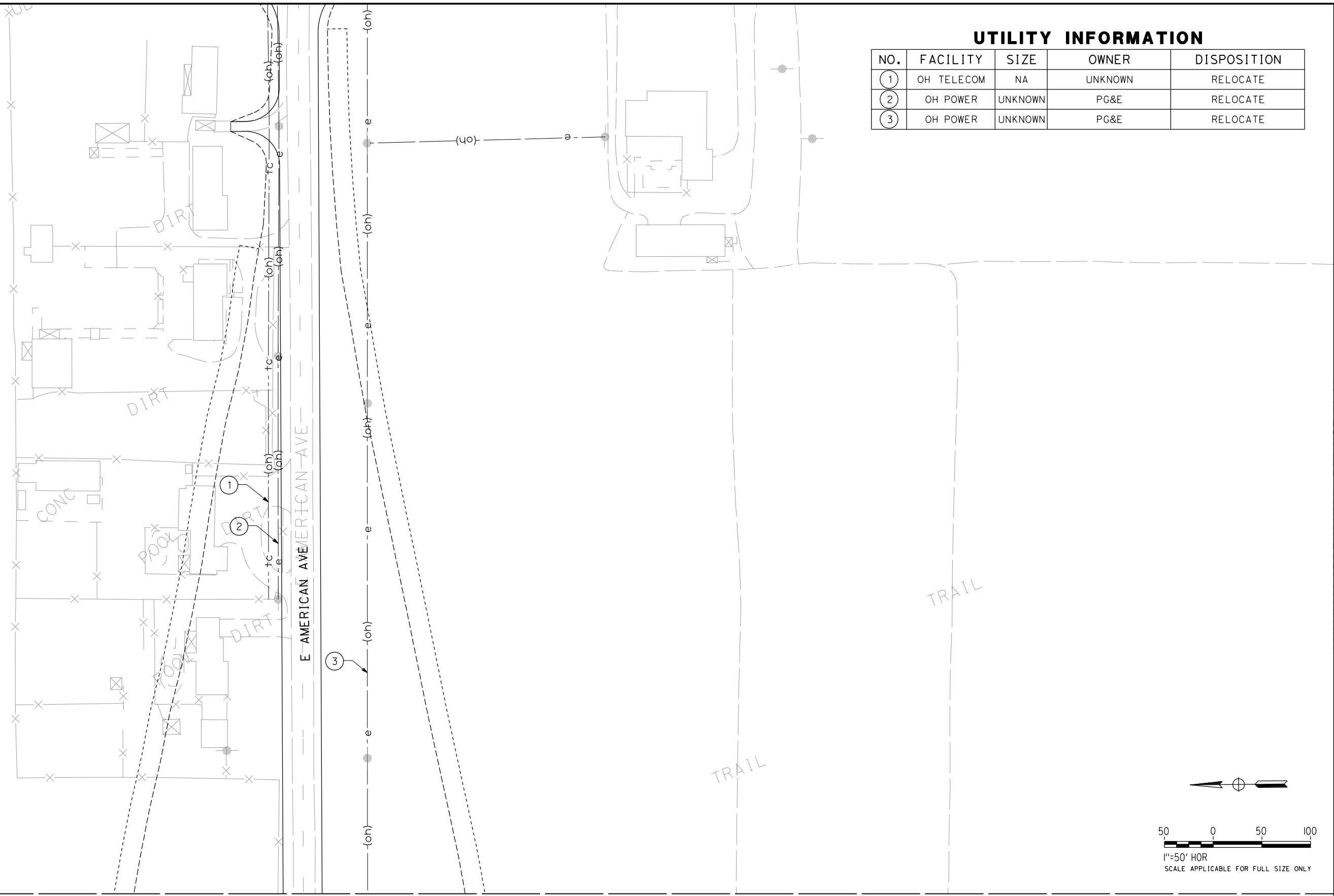
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
E CENTRAL AVE

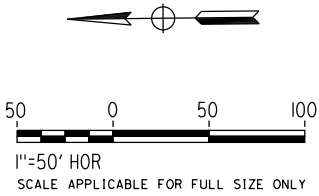
CONTRACT NO.
DRAWING NO. UT-C4086
SCALE AS SHOWN
SHEET NO.



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UTILITY INFORMATION				
NO.	FACILITY	SIZE	OWNER	DISPOSITION
①	OH TELECOM	NA	UNKNOWN	RELOCATE
②	OH POWER	UNKNOWN	PG&E	RELOCATE
③	OH POWER	UNKNOWN	PG&E	RELOCATE



MATCH LINE - (UT-4077)

ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

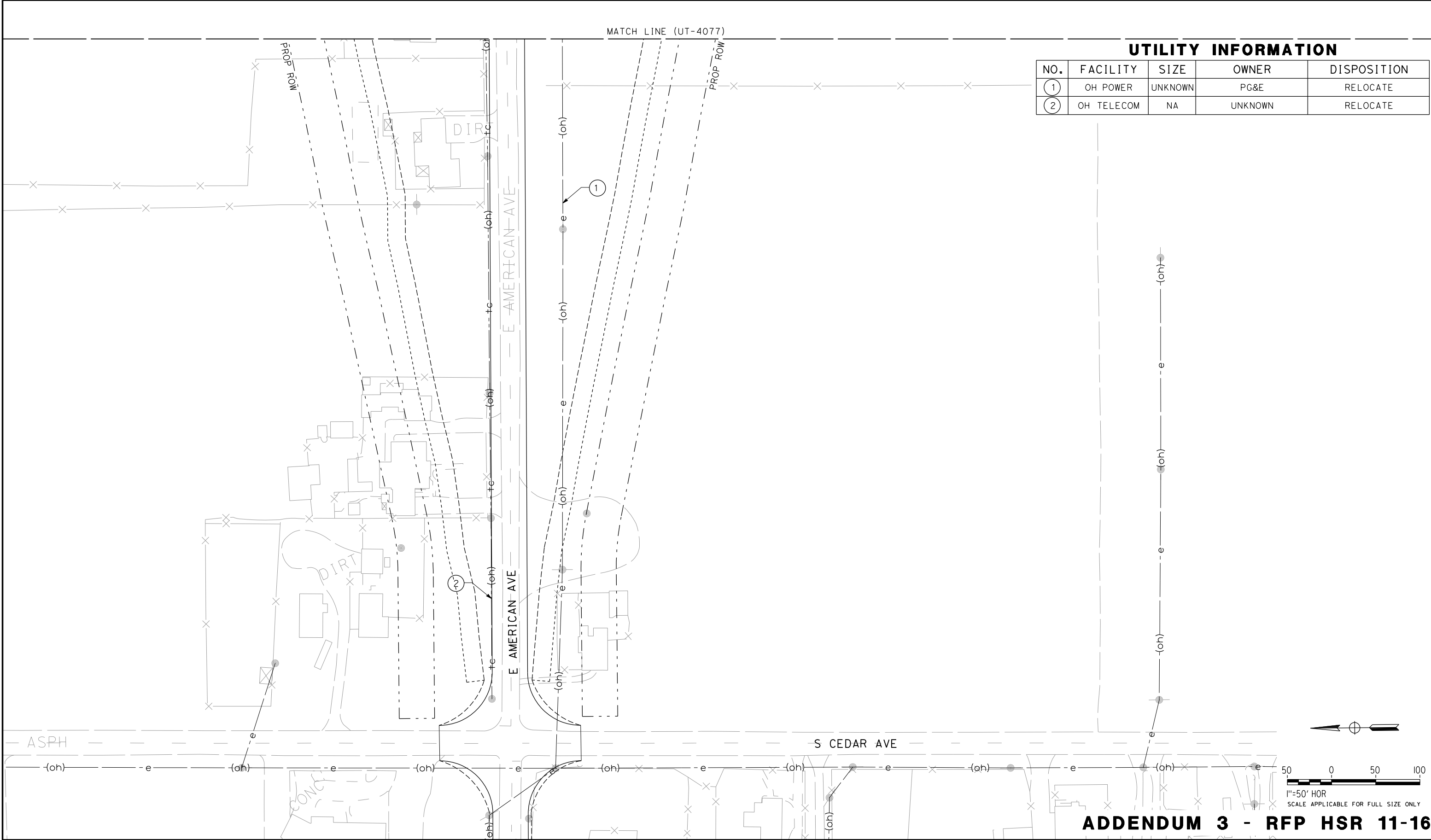


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
E AMERICAN AVE

CONTRACT NO.
DRAWING NO. UT-C4087
SCALE AS SHOWN
SHEET NO.

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UTILITY INFORMATION

NO.	FACILITY	SIZE	OWNER	DISPOSITION
①	OH POWER	UNKNOWN	PG&E	RELOCATE
②	OH TELECOM	NA	UNKNOWN	RELOCATE

ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY C. ALLEN
DRAWN BY S. KHAN
CHECKED BY M. POLISCHUK
IN CHARGE J. LABANOWSKI
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**

PACKAGE 1C  
UTILITIES  
COMPOSITE UTILITY PLAN  
E AMERICAN AVE

CONTRACT NO.
DRAWING NO. UT-C4088
SCALE AS SHOWN
SHEET NO.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. SEYMOUR
DRAWN BY P. TONKIN
CHECKED BY D. HUNT
IN CHARGE R. COFFIN
DATE 06/06/12

**NOT FOR  
CONSTRUCTION**

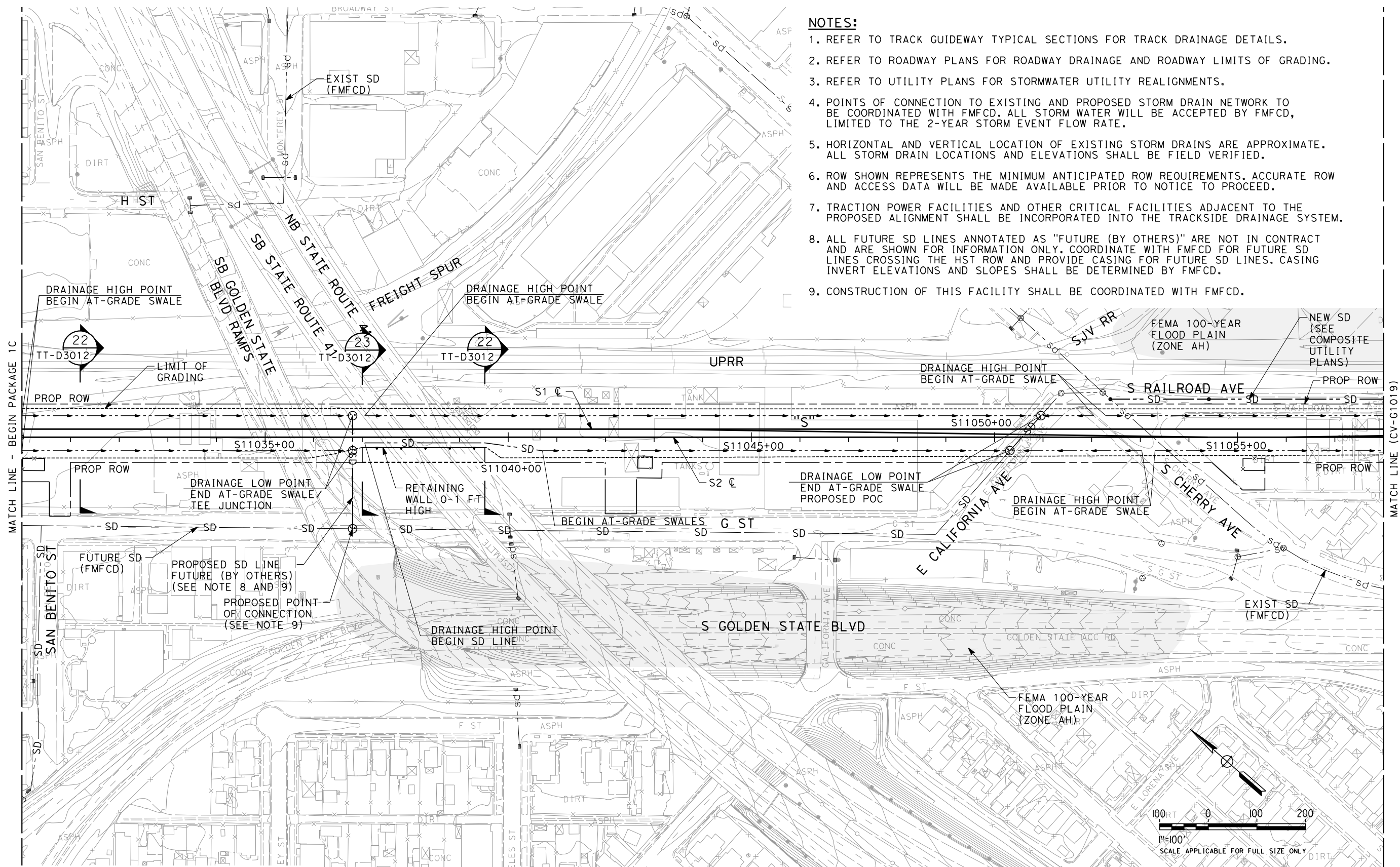


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**SIERRA SUBDIVISION**  
PACKAGE 1C  
UTILITIES  
GRADING AND DRAINAGE  
KEY MAP

CONTRACT NO.	
DRAWING NO.	CV-B0021
SCALE	AS SHOWN
SHEET NO.	



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- NOTES:**
1. REFER TO TRACK GUIDEWAY TYPICAL SECTIONS FOR TRACK DRAINAGE DETAILS.
  2. REFER TO ROADWAY PLANS FOR ROADWAY DRAINAGE AND ROADWAY LIMITS OF GRADING.
  3. REFER TO UTILITY PLANS FOR STORMWATER UTILITY REALIGNMENTS.
  4. POINTS OF CONNECTION TO EXISTING AND PROPOSED STORM DRAIN NETWORK TO BE COORDINATED WITH FMFCD. ALL STORM WATER WILL BE ACCEPTED BY FMFCD, LIMITED TO THE 2-YEAR STORM EVENT FLOW RATE.
  5. HORIZONTAL AND VERTICAL LOCATION OF EXISTING STORM DRAINS ARE APPROXIMATE. ALL STORM DRAIN LOCATIONS AND ELEVATIONS SHALL BE FIELD VERIFIED.
  6. ROW SHOWN REPRESENTS THE MINIMUM ANTICIPATED ROW REQUIREMENTS. ACCURATE ROW AND ACCESS DATA WILL BE MADE AVAILABLE PRIOR TO NOTICE TO PROCEED.
  7. TRACTION POWER FACILITIES AND OTHER CRITICAL FACILITIES ADJACENT TO THE PROPOSED ALIGNMENT SHALL BE INCORPORATED INTO THE TRACKSIDE DRAINAGE SYSTEM.
  8. ALL FUTURE SD LINES ANNOTATED AS "FUTURE (BY OTHERS)" ARE NOT IN CONTRACT AND ARE SHOWN FOR INFORMATION ONLY. COORDINATE WITH FMFCD FOR FUTURE SD LINES CROSSING THE HST ROW AND PROVIDE CASING FOR FUTURE SD LINES. CASING INVERT ELEVATIONS AND SLOPES SHALL BE DETERMINED BY FMFCD.
  9. CONSTRUCTION OF THIS FACILITY SHALL BE COORDINATED WITH FMFCD.

**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. SCHLERETH
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BURGESS
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



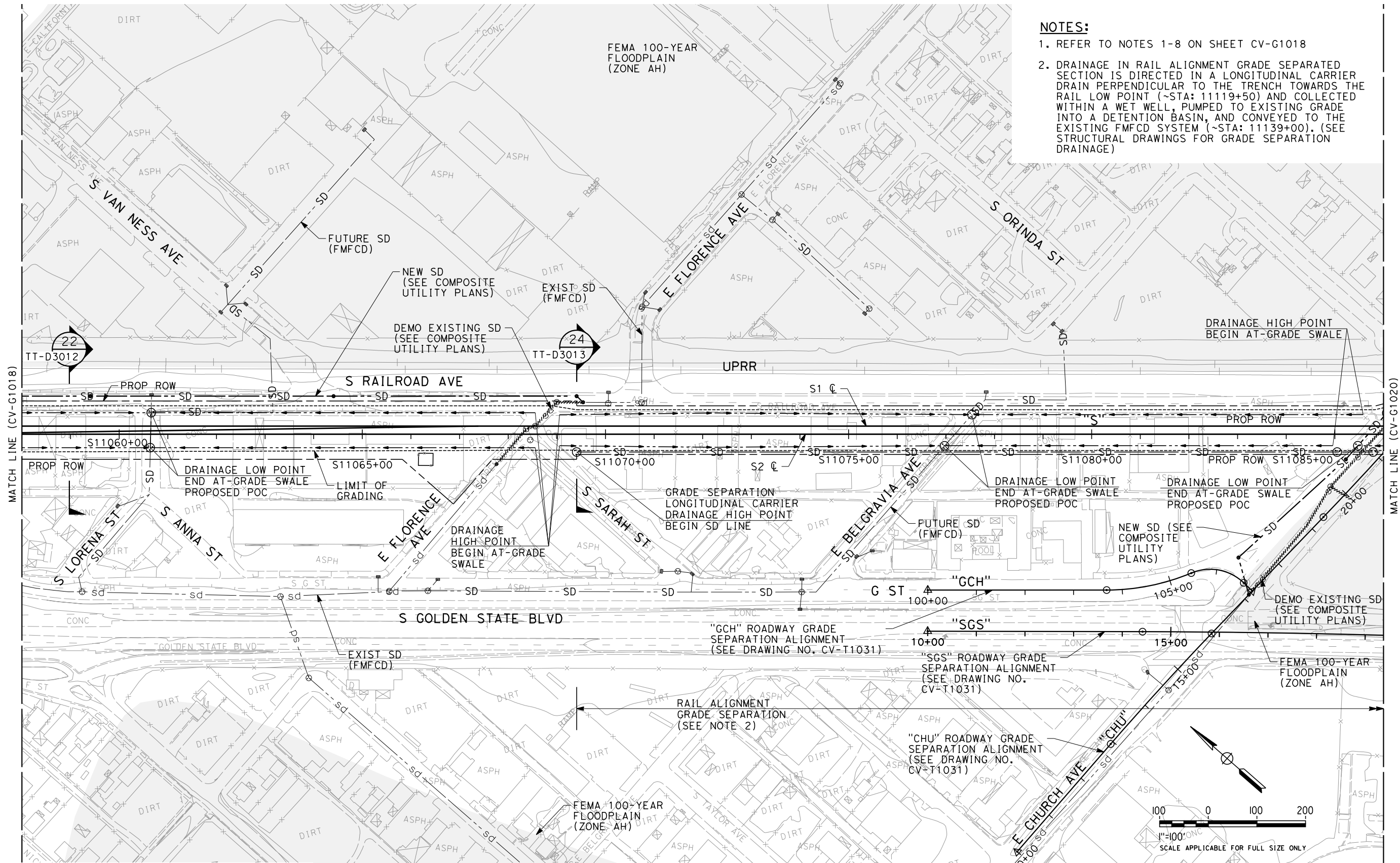
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
UTILITIES  
GRADING AND DRAINAGE PLAN  
STA. 11030+00 TO STA. 11058+00

CONTRACT NO.
DRAWING NO. CV-G1018
SCALE AS SHOWN
SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16



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**NOTES:**

1. REFER TO NOTES 1-8 ON SHEET CV-G1018
2. DRAINAGE IN RAIL ALIGNMENT GRADE SEPARATED SECTION IS DIRECTED IN A LONGITUDINAL CARRIER DRAIN PERPENDICULAR TO THE TRENCH TOWARDS THE RAIL LOW POINT (~STA: 11119+50) AND COLLECTED WITHIN A WET WELL, PUMPED TO EXISTING GRADE INTO A DETENTION BASIN, AND CONVEYED TO THE EXISTING FMFCD SYSTEM (~STA: 11139+00). (SEE STRUCTURAL DRAWINGS FOR GRADE SEPARATION DRAINAGE)

**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. SCHLERETH
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BURGESS
IN CHARGE R. COFFIN
DATE 06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

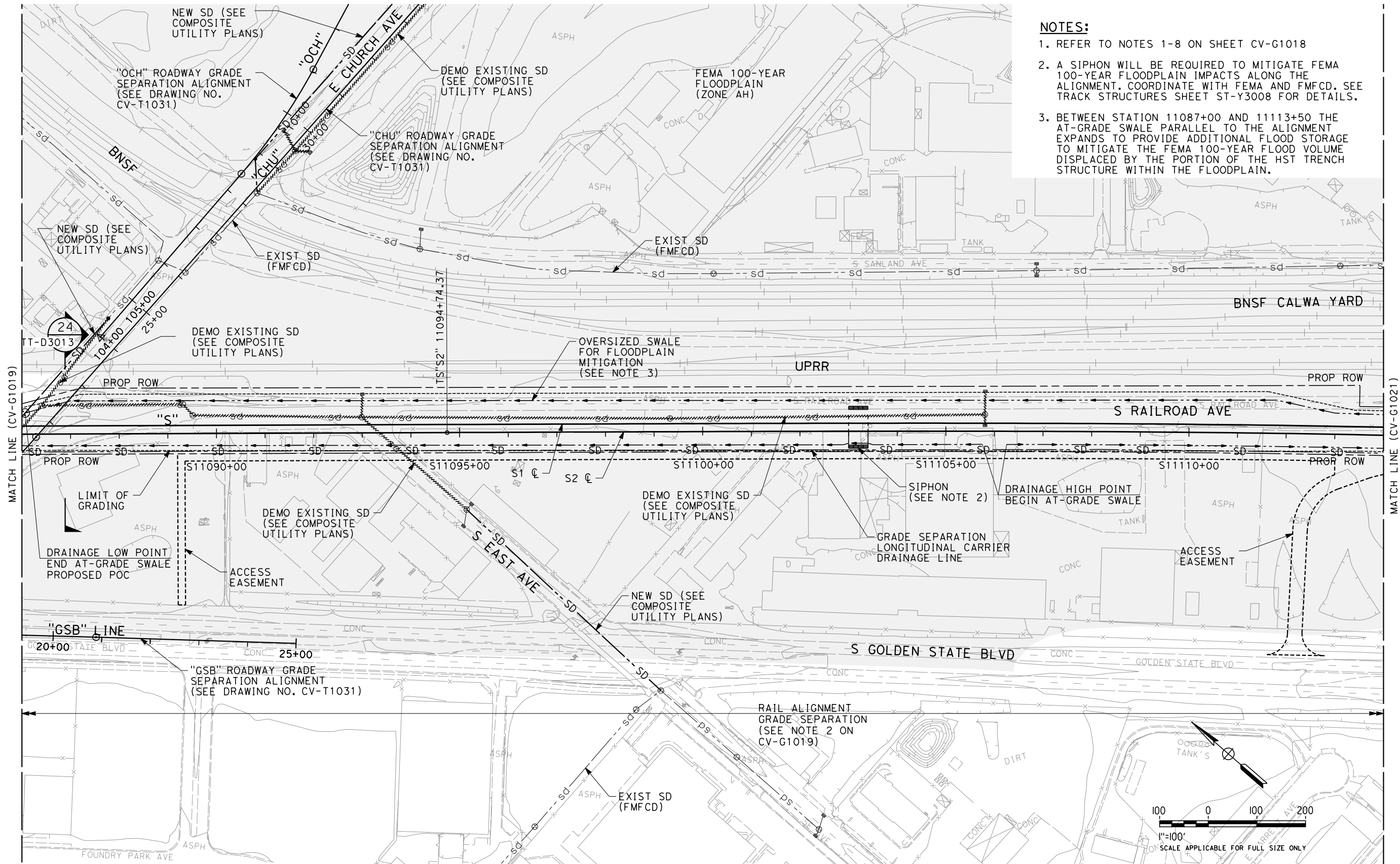


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
UTILITIES  
GRADING AND DRAINAGE PLAN  
STA. 11058+00 TO STA. 11086+00

CONTRACT NO.
DRAWING NO. CV-G1019
SCALE AS SHOWN
SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16

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- NOTES:**
1. REFER TO NOTES 1-8 ON SHEET CV-G1018
  2. A SIPHON WILL BE REQUIRED TO MITIGATE FEMA 100-YEAR FLOODPLAIN IMPACTS ALONG THE ALIGNMENT. COORDINATE WITH FEMA AND FMFCD. SEE TRACK STRUCTURES SHEET ST-Y3008 FOR DETAILS.
  3. BETWEEN STATION 11087+00 AND 11113+50 THE AT-GRADE SWALE PARALLEL TO THE ALIGNMENT EXPANDS TO PROVIDE ADDITIONAL FLOOD STORAGE TO MITIGATE THE FEMA 100-YEAR FLOOD VOLUME DISPLACED BY THE PORTION OF THE HST TRENCH STRUCTURE WITHIN THE FLOODPLAIN.

### ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
G. SCHLERETH  
DRAWN BY  
E. SUDHAUSEN  
CHECKED BY  
S. BURGESS  
IN CHARGE  
R. COFFIN  
DATE  
06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



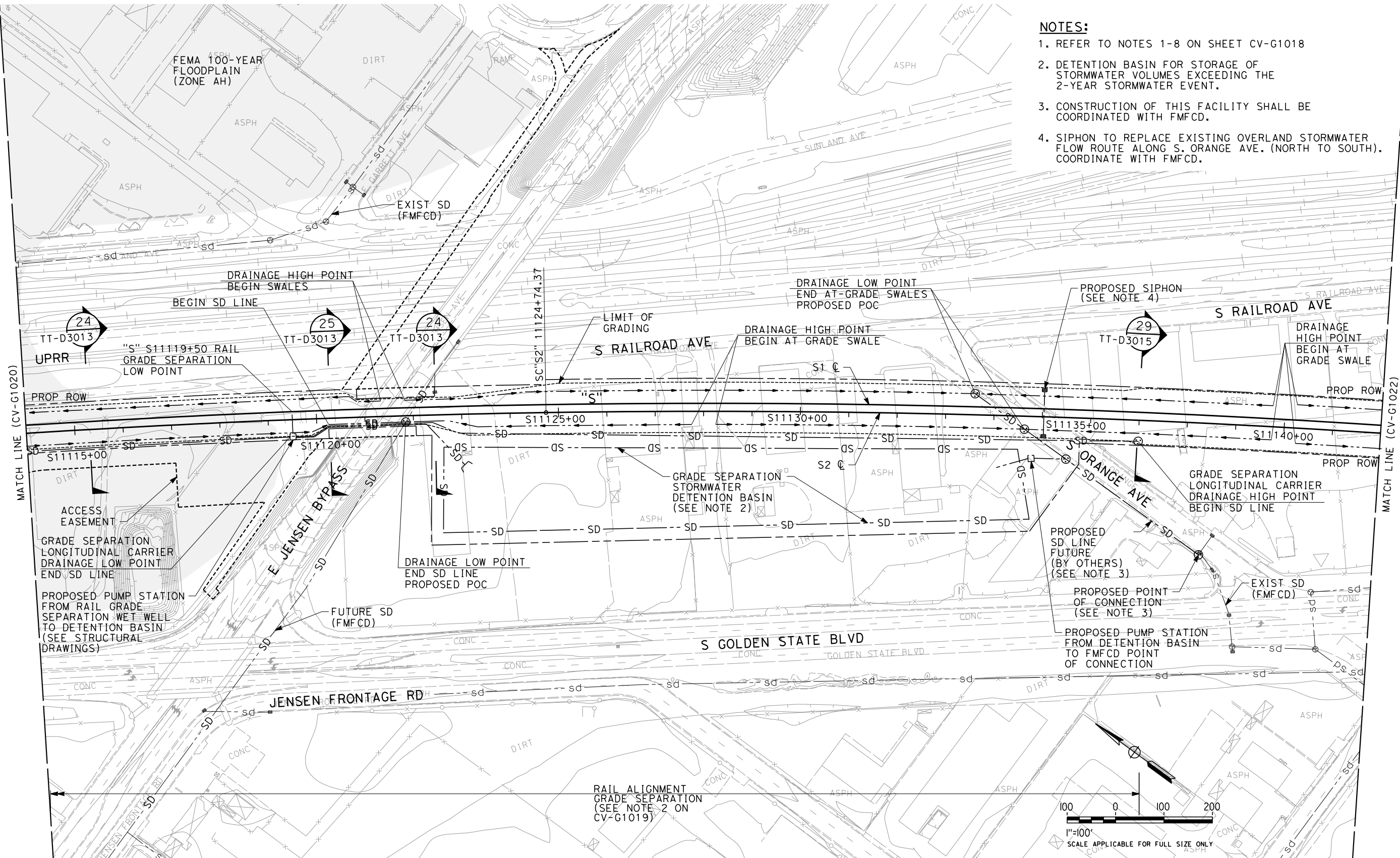
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
UTILITIES  
GRADING AND DRAINAGE PLAN  
STA. 11086+00 TO STA. 11114+00

CONTRACT NO.  
DRAWING NO.  
CV-G1020  
SCALE  
AS SHOWN  
SHEET NO.



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- NOTES:**
1. REFER TO NOTES 1-8 ON SHEET CV-G1018
  2. DETENTION BASIN FOR STORAGE OF STORMWATER VOLUMES EXCEEDING THE 2-YEAR STORMWATER EVENT.
  3. CONSTRUCTION OF THIS FACILITY SHALL BE COORDINATED WITH FMFCD.
  4. SIPHON TO REPLACE EXISTING OVERLAND STORMWATER FLOW ROUTE ALONG S. ORANGE AVE. (NORTH TO SOUTH). COORDINATE WITH FMFCD.



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
G. SCHLERETH  
DRAWN BY  
E. SUDHAUSEN  
CHECKED BY  
S. BURGESS  
IN CHARGE  
R. COFFIN  
DATE  
06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**

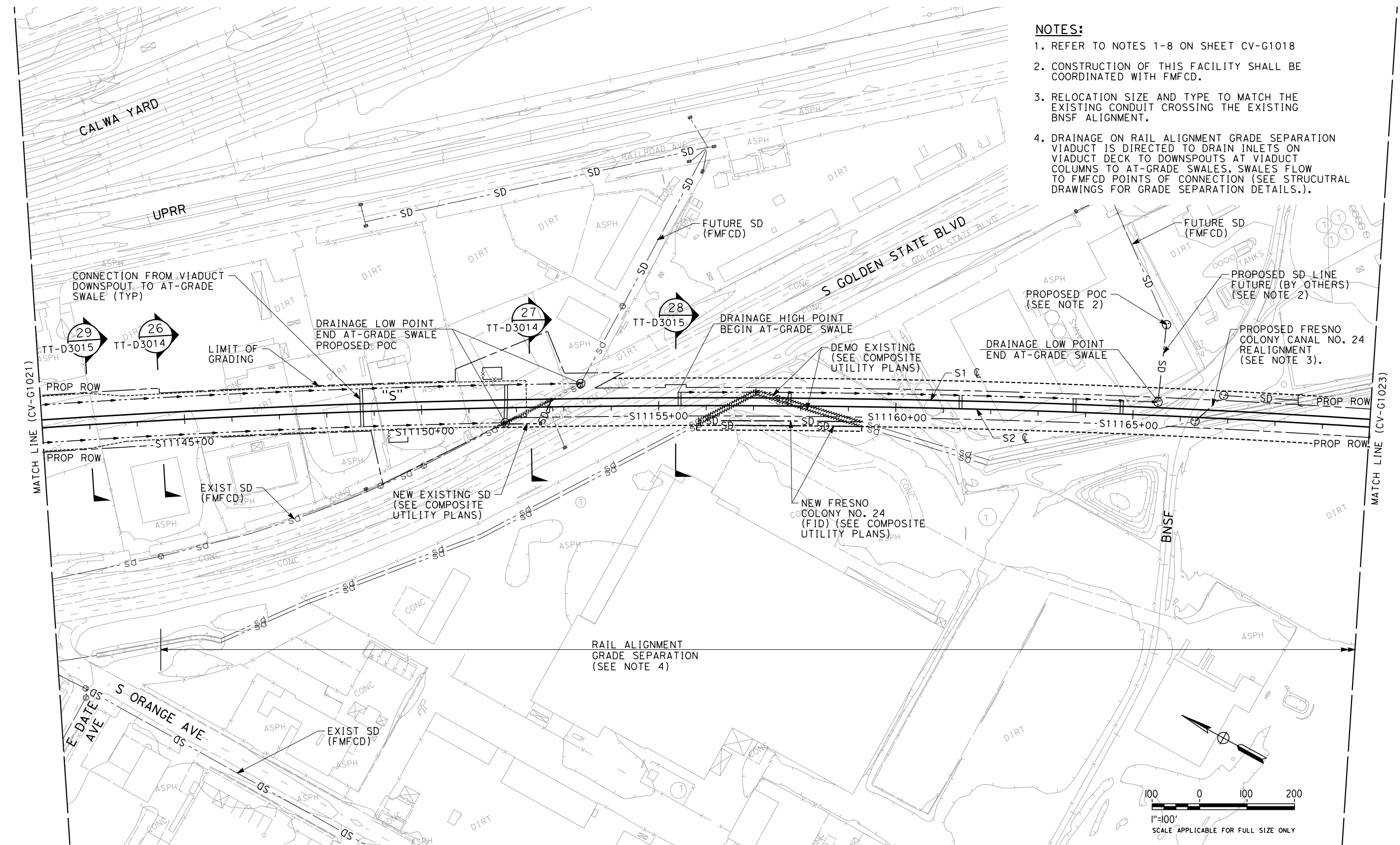


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
UTILITIES  
GRADING AND DRAINAGE PLAN  
STA. 11114+00 TO STA. 11142+00

CONTRACT NO.
DRAWING NO. CV-G1021
SCALE AS SHOWN
SHEET NO.

06/29/2012 ADDENDUM 3 - RFP HSR 11-16

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**NOTES:**

1. REFER TO NOTES 1-8 ON SHEET CV-G1018
2. CONSTRUCTION OF THIS FACILITY SHALL BE COORDINATED WITH FMFCD.
3. RELOCATION SIZE AND TYPE TO MATCH THE EXISTING CONDUIT CROSSING THE EXISTING BNSF ALIGNMENT.
4. DRAINAGE ON RAIL ALIGNMENT GRADE SEPARATION VIADUCT IS DIRECTED TO DRAIN INLETS ON VIADUCT DECK TO DOWNSPOUTS AT VIADUCT COLUMNS TO AT-GRADE SWALES. SWALES FLOW TO FMFCD POINTS OF CONNECTION (SEE STRUCTURAL DRAWINGS FOR GRADE SEPARATION DETAILS.).

**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
G. SCHLERETH  
DRAWN BY  
E. SUDHAUSEN  
CHECKED BY  
S. BURGESS  
IN CHARGE  
R. COFFIN  
DATE  
06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



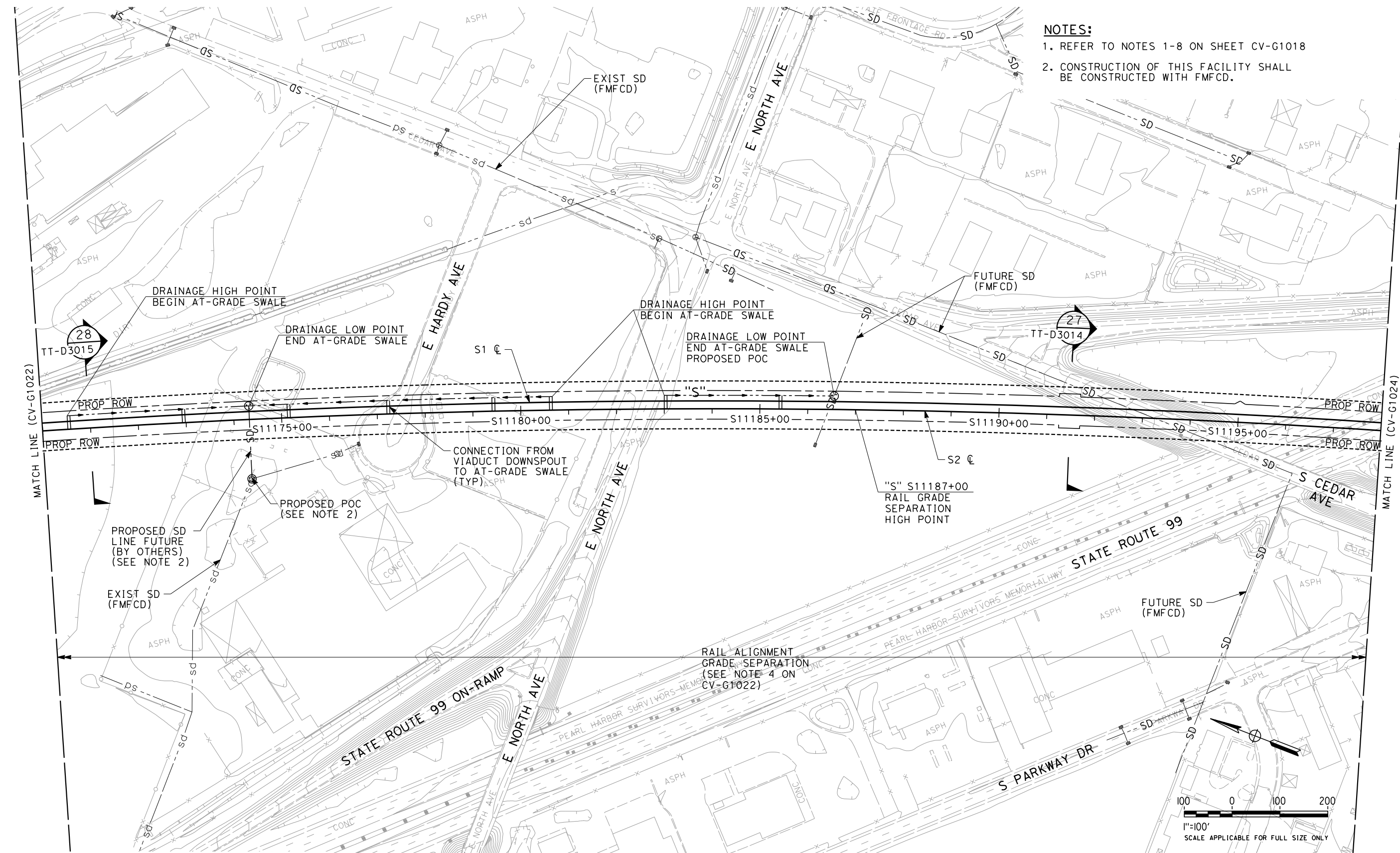
**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
UTILITIES  
GRADING AND DRAINAGE PLAN  
STA. 11142+00 TO STA. 11170+00

CONTRACT NO.  
DRAWING NO.  
CV-G1022  
SCALE  
AS SHOWN  
SHEET NO.



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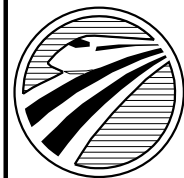
### ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
G. SCHLERETH  
DRAWN BY  
E. SUDHAUSEN  
CHECKED BY  
S. BURGESS  
IN CHARGE  
R. COFFIN  
DATE  
06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
UTILITIES  
GRADING AND DRAINAGE PLAN  
STA. 11170+00 TO STA. 11198+00

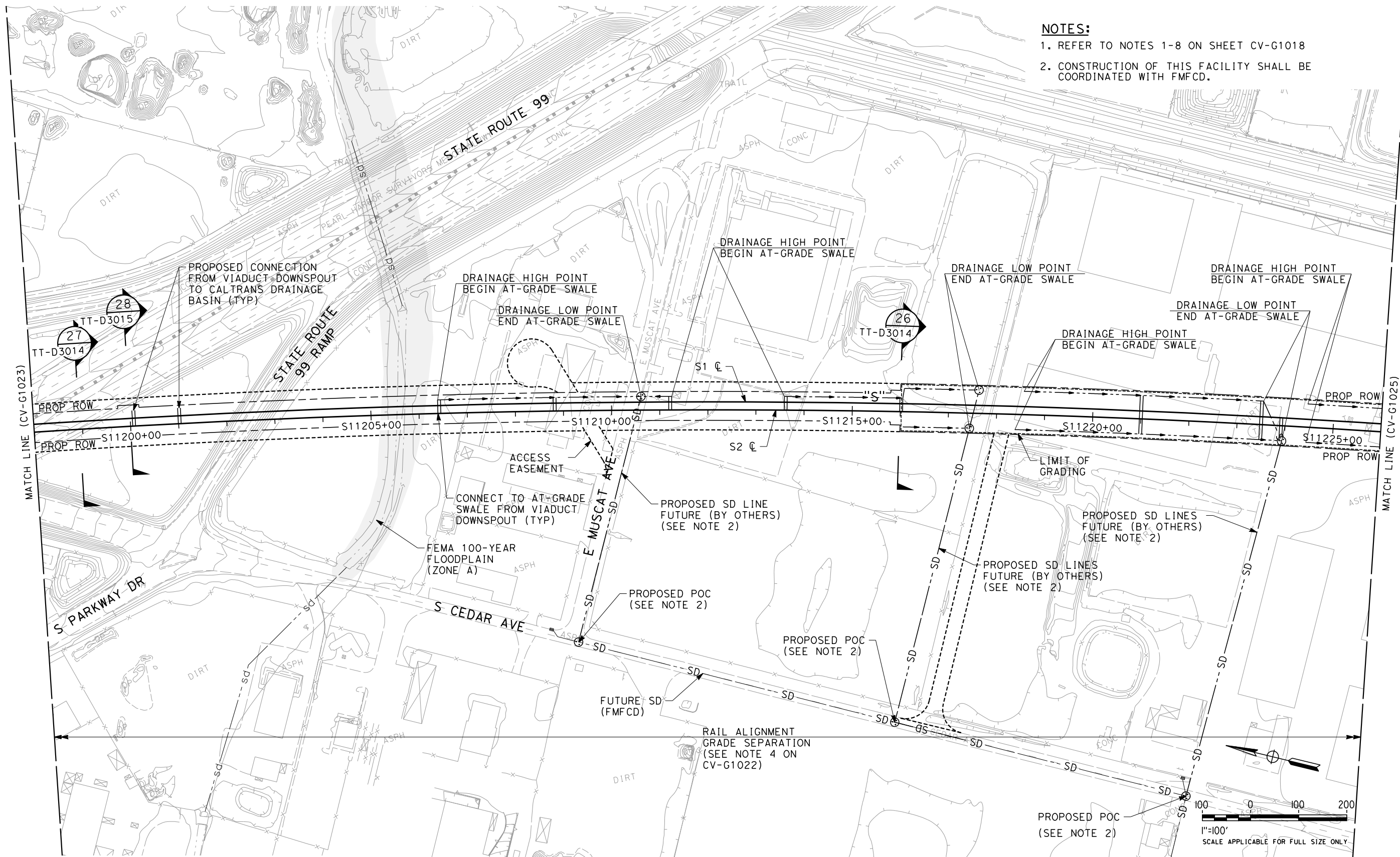
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06/29/2012 ADDENDUM 3 - RFP HSR 11-16



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- NOTES:**
1. REFER TO NOTES 1-8 ON SHEET CV-G1018
  2. CONSTRUCTION OF THIS FACILITY SHALL BE COORDINATED WITH FMFCD.



**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY G. SCHLERETH
DRAWN BY E. SUDHAUSEN
CHECKED BY S. BURGESS
IN CHARGE R. COFFIN
DATE 06/06/12

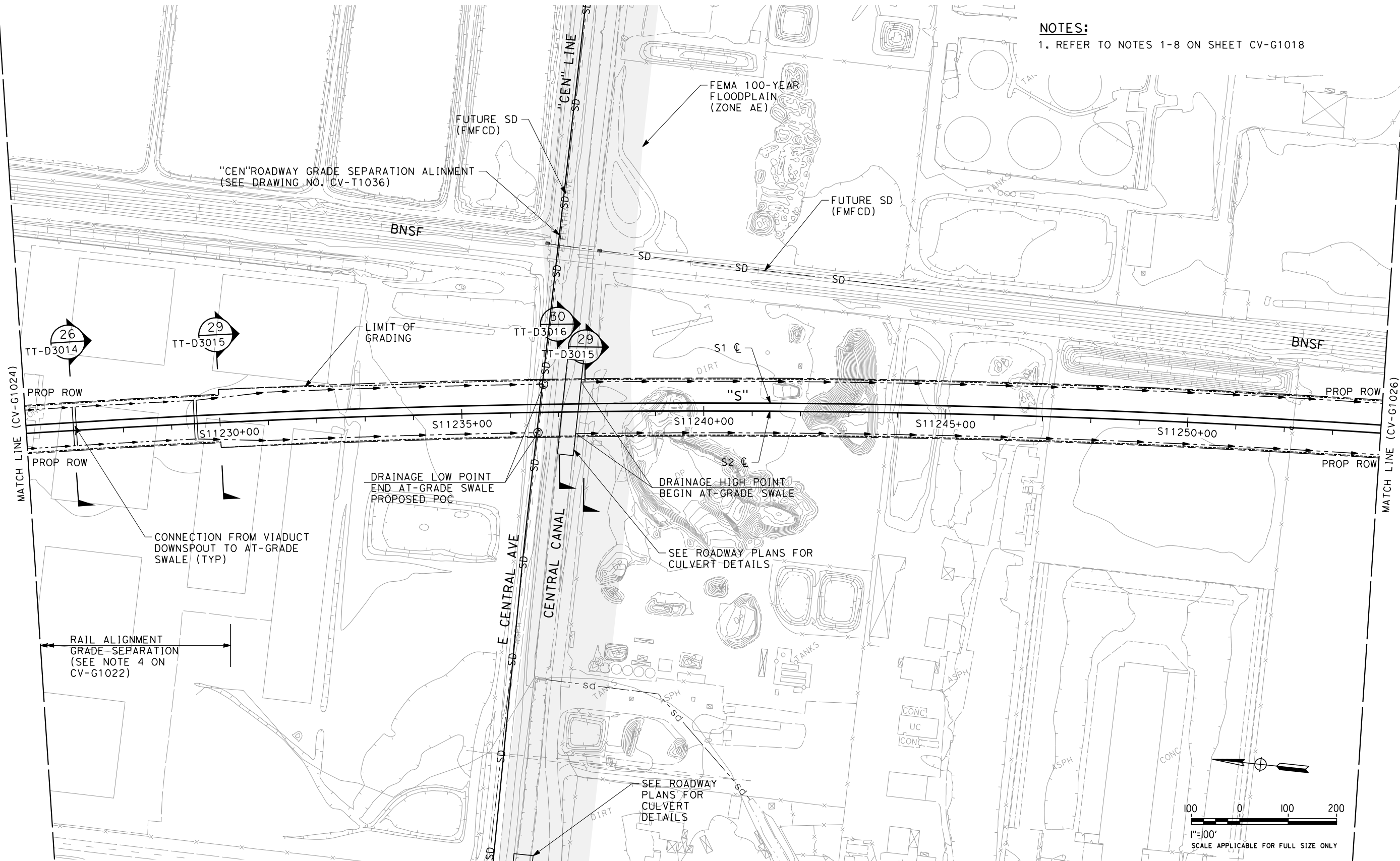
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<b>NOT FOR CONSTRUCTION</b>



<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT SIERRA SUBDIVISION</b>
PACKAGE 1C UTILITIES GRADING AND DRAINAGE PLAN STA. 11198+00 TO STA. 11226+00

CONTRACT NO.
DRAWING NO. CV-G1024
SCALE AS SHOWN
SHEET NO.

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NOTES:  
1. REFER TO NOTES 1-8 ON SHEET CV-G1018

### ADDENDUM 3 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
G. SCHLERETH  
DRAWN BY  
E. SUDHAUSEN  
CHECKED BY  
S. BURGESS  
IN CHARGE  
R. COFFIN  
DATE  
06/06/12

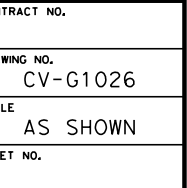
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NOT FOR  
CONSTRUCTION



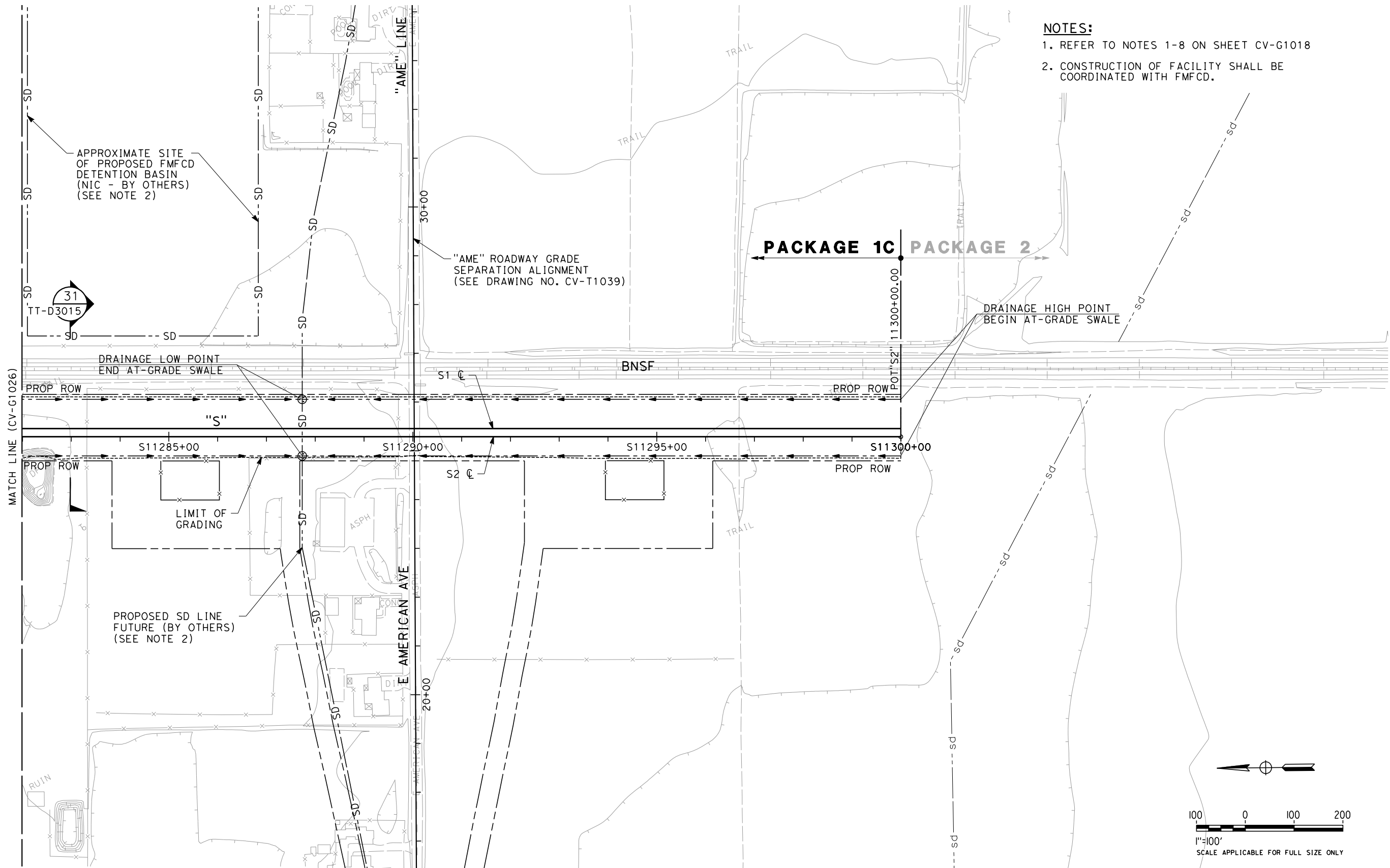
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
UTILITIES  
GRADING AND DRAINAGE PLAN  
STA. 11226+00 TO STA. 11254+00

CONTRACT NO.
DRAWING NO. CV-G1025
SCALE AS SHOWN
SHEET NO.





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- NOTES:**
1. REFER TO NOTES 1-8 ON SHEET CV-G1018
  2. CONSTRUCTION OF FACILITY SHALL BE COORDINATED WITH FMFCD.

**ADDENDUM 3 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
G. SCHLERETH  
DRAWN BY  
E. SUDHAUSEN  
CHECKED BY  
S. BURGESS  
IN CHARGE  
R. COFFIN  
DATE  
06/06/12

**PROPOSED  
PRELIMINARY  
DESIGN**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
SIERRA SUBDIVISION**  
PACKAGE 1C  
UTILITIES  
GRADING AND DRAINAGE PLAN  
STA. 11282+00 TO STA. 11300+00

CONTRACT NO.
DRAWING NO. CV-G1027
SCALE AS SHOWN
SHEET NO.